



**MEDICAL UNIVERSITY
OF
SOUTH CAROLINA**

Annual Report
1979-1980



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SOUTH CAROLINA

Annual Report

1979-1980

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Honorable Ladies and Gentlemen:

In submitting this annual report, I take this opportunity to thank you personally for your generous actions enabling the Medical University to proceed with a number of vital projects. Of particular note were the bonding authority granted for the proposed East Wing-Children's Hospital Addition and multipurpose central receiving facility, and the support allowing for the growth of needed medical residency programs around the State. These actions transformed the report period into a truly pivotal year. We look forward to the expanded opportunities to serve the people of South Carolina.

Sincerely,

WILLIAM H. KNISELY, Ph.D.

President

WHK/ey

"An equal opportunity m/f affirmative action employer"

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MEDICAL UNIVERSITY OF SOUTH CAROLINA

Founded in 1824 as the first medical school in the South, the Medical University has the unique status of being the State's only free-standing academic health center providing a comprehensive range of programs in the biomedical sciences. The programs are conducted through six colleges (Medicine, Dental Medicine, Graduate Studies, Pharmacy, Nursing, Allied Health Sciences), a 572-bed teaching hospital and numerous state affiliations.

Through most of its history, the University was a proprietary institution. It was only through the dedication of faculty and friends that it survived the adversities of war, earthquake and Reconstruction poverty. With much heavier fiscal demands placed upon medical education as the result of the Flexner Report, the school successfully petitioned the State to assume ownership in 1913. University status was achieved in 1969.

Today the scope and geographical extent of its services are impressive. Through regional affiliations, more than 50 South Carolina hospitals are able to participate fully or in part in such activities as undergraduate and graduate professional education, programs for the advancement of minorities and the disadvantaged, lay health promotion and disease prevention, and continuing education. Learning resources are shared through both the University's Health Sciences Library and Division of Continuing Education.

The University's research effort is necessarily deep and broad as the institution serves as a focal point for the acquisition and application of new biomedical knowledge.

Having established national models in statewide cooperation, the Medical University anticipates a decade of new and effective programs of education, research and public service in response to the needs of South Carolina.

COLLEGE OF MEDICINE

The year could be generally described as a period of new beginnings.

Successful leadership searches set in motion programs of revitalization for the Departments of Biochemistry, Anatomy, Dermatology and the Division of Thoracic Surgery.

New approaches were taken to the funding of major projects. Negotiations for the construction of a psychiatric hospital using private resources were initiated. The Drug Science Foundation was formalized for the purpose of marshalling the resources of private industry for the development of research. Institutional bonding was committed, at new levels, to the development of a number of plant improvements and the State gave final approval to the construction of the East Wing-Children's Hospital Addition.

Charleston County Hospital is now under the management of the Medical University. This contractual arrangement should allow for better service and training opportunities as well as for improved financing of indigent care.

Faculty of the College of Medicine undertook four significant studies designed to update policy and improve administrative process. The study areas included: (1) the honor code, (2) the required passage of Part I of the National Board Examination (prior to entering clinical work), (3) grading and student evaluation (basic and clinical years), and (4) student awards for academic achievement.

With the shifting of support for graduate medical education from the Federal to State government, the financial structuring of the Area Health Education Centers received a great deal of attention, including an exhaustive study of the cost of graduate medical education.

The Dean's Office of the College of Medicine was relocated from the first floor of the Basic Science Building to the fifth floor of the University Services Building, resulting in a net gain of space and the added convenience of close proximity to the College of Graduate Studies and the MUSC Extension Programs.

College fiscal affairs enjoyed a growth of nearly four million dollars to a total of \$31,085,899, enabling some faculty growth, salary increases, and capital (equipment) improvements.

The faculty continued its replacement and growth process with a net gain of 21 full-time faculty; part-time faculty experienced a net gain of 38.

The College of Medicine has admitted 165 students each year since 1971. This year they were selected from a pool of 887 applicants. Their mean Grade Point Average was 3.7, the same as the previous year, and their mean score in the Medical College Aptitude Test was 51.

Faculty achieving Emeritus status this year were Dr. Joseph V. Fisher, Family Medicine, and Dr. I. S. H. Metcalf and Dr. Elsie Taber, Anatomy. The status of Dr. John A. Siegling was changed from Professor Emeritus to Clinical Professor Emeritus.

The year was saddened by the deaths of the following colleagues: William S. Lang, Jr., M.D., Clinical Associate Professor of Otolaryngology (Greenville), September 24, 1979; Edward E. McKee, M.D., Professor of Pathology, December 21, 1979; Hubert Meredith, M.B.B.S., Associate Professor of Radiology, January 1, 1980, and Dr. Joseph F. A. McManus, Professor of Pathology and former Dean of the College, March 5, 1980.

As is the custom, this Annual Report features one component of the College for inclusion in detail. This year it was appropriate to feature the non-profit Drug Science Foundation which has moved rapidly ahead in its program to foster new drug development and improved therapeutics and patient care, and to catalyze an increase in Academic-Industrial-Governmental-Public collaboration toward these ends. This Foundation is also designed to offer support to the University and State in the patent filing and licensing areas. In this way, the Drug Science Foundation helps transfer technology from the University directly to the public while enhancing the likelihood of increasing patent royalty income to the Medical University and State.

The Drug Science Foundation (DSF)

Following is a list of major accomplishments during the year:

1. Increased assets from \$250,000 to \$1,005,287, primarily due to receipt of a \$350,000 unrestricted grant from Dow Chemical Company;
2. Developed agreements involving Brokerage, Investment Counseling, Communication Management and Auditing;
3. Entered into a Facilities Rental Agreement with the Medical University of South Carolina (MUSC);
4. Entered into an Invention Assignment and Administration Agreement with the MUSC;
5. Helped MUSC submit an Institutional Patent Agreement to the U. S. Department of Health and Human Services to allow

- ownership of Government-supported inventions by the Medical University. This application was approved July 7, 1980;
6. Assisted in filing four U. S. and foreign patents on behalf of MUSC faculty;
 7. Negotiated a Licensing Agreement for one Medical University-DSF patent with the Dow Chemical Company;
 8. Entered negotiations for Licensing Agreements on two additional Medical University-DSF patents with Searle and Merrel Drugs;
 9. Had two MUSC-DSF use-patents issued on methylthioacetaminophen; these patents are now also pending on behalf of the University and DSF in West Germany and Japan;
 10. Had one Medical University-DSF patent approved to be issued in all of the Common Market Countries of Europe; patent still pending in the U. S.;
 11. Helped provide continuing support for an academic-industrial undergraduate college student Co-op Program in the Drug Sciences. To date 15 students from outstanding colleges and universities in South Carolina and throughout the nation have been supported under this program;
 12. Sponsored and completed a twenty-hour public lecture series on Drug Design, Discovery and Development by Dr. Karl Beyer;
 13. Made a \$1,000 donation to the Charleston Museum in the name of Stephen Elliott, a South Carolinian, Founder and President of the State Bank of S. C., author, botanist, teacher, legislator and innovator;
 14. Made a \$1,000 donation in support of the Second International Symposium on Biologically Reactive Intermediates to be held in Surrey, England. This meeting is co-directed by Dr. David Jollow, faculty member and consultant to DSF;
 15. Developed, reviewed and approved a Faculty Incentive Plan for Medical University and other College and University faculty to work in association with the Foundation. This proposal will be submitted for review to the Administration and Trustees of the Medical University;
 16. Prepared a proposal for a DSF-MUSC Sharing Agreement on Contract that would provide for the sharing and donation of personnel and other services between the DSF and MUSC;
 17. Prepared a succinct written description of the Goals, Organization, Programs and History of the DSF to be used as the

basis for public and professional education about the Foundation, as well as requests for grants and other types of support for the Foundation;

18. Continued consultations with a group of distinguished scientific advisors to the Foundation;
19. Enlisted the interest of state and local officials, increasing likelihood of additional support and participation in Foundation programs;
20. Extended the Dow-DSF Collaborative Research Agreement for two additional years, with a legally binding agreement from Dow to provide an additional \$350,000 of unrestricted support to the Foundation on or before March 15, 1981;
21. Worked to encourage and support excellence of scholarship, creative expression, and improved therapeutics and patient care at the MUSC and throughout South Carolina;
22. Attracted distinguished scientists to the Medical University campus, scientists who have stimulated the learning process for students and faculty members alike;
23. Developed, reviewed and received DSF Board approval in principle of a Five Year Plan for the further development and operation of the DSF. The plan calls for the:
 - A. Appointment of a National Advisory-Fund Raising Committee for the DSF.
 - B. Raising one million dollars from people and corporations in South Carolina within the next 12 months—to be used primarily as partial endowment for named DSF Fellows and Scholars, e.g., the DSF—(name of industry) Scholar.
 - C. Appointment of as many DSF Fellows and Scholars as financial resources and quality applicants allow.
 - D. Preparation and submission to national foundations and corporations of DSF applications for two million dollars of DSF endowment and other funds.
 - E. Development and implementation of a cost-effective plan for DSF collaboration with other colleges and universities in South Carolina and the United States, e.g., University of South Carolina at Columbia, Clemson, Furman, M.I.T., Stanford, and Yale.
 - F. Development and implementation of a cost-effective DSF plan to assist the South Carolina Development Board in its efforts to attract high-technology research-based industries in the pharmaceutical and chemical fields.

- G. Development and implementation of a cost-effective DSF public and professional education program that speaks to the problems associated with the discovery, use and abuse of drugs and chemicals by society.
- H. Appointment of a full-time administrator for the DSF.
- I. Development of a cost-effective agreement or contract between the DSF and MUSC primarily for the sharing of personnel and other services between the two entities for submission to the MUSC Administration and Board.
- J. Submitting the DSF-Faculty Consultation Compensation Plan to the MUSC Administration and Board for their review and action.
- K. Submitting a DSF application to the National Science Foundation, Federal Drug Administration and the U. S. Department of Commerce asking for support of a Generic Technology Center for cost-effective Studies of New Molecules.
- L. Development of a long-range and cost-effective plan to assist the MUSC and State of South Carolina in their further development of excellence in health research, patient care, and educational programs.
- M. Maintenance, improvement and expansion of the Dow-DSF Agreement and interaction.
- N. Increase in number of pharmaceutical and chemical firms that participate in and help support DSF programs.
- O. Development of a reliable cost estimate for construction of a DSF Building.
- P. Submission of a request to the MUSC Administration and Board asking for authorization to proceed with private fund raising for eventual construction of a DSF Building connected to the Medical University Hospital.
- Q. Continued efforts to increase the research excellence and productivity of the DSF.
- R. Build on existing strengths (in the DSF and its affiliated institutions) and emphasize cost-effectiveness, cooperative planning, and avoidance of competition.

COLLEGE OF DENTAL MEDICINE

The College's return to the four-year curriculum was greeted with enthusiasm by students and faculty. As a result of the change-over, there was no graduating class during the year. The curriculum was under constant review for improvements in an effort to produce highly competent dentists able to perform comprehensive clinical dentistry for people of all age groups.

The faculty stabilized considerably and four new department chairmen were named. They were: Dr. John Jarrett, Oral Pathology; Dr. Richard DeChamplain, Oral and Maxillofacial Surgery; Dr. Thomas Serene, Endodontics, and Dr. Robert Staffanou, Crown and Bridge.

All clinics functioned in an acceptable fashion, but attention is called to the need to adjust grade levels upward for dental assistants and dental laboratory technicians. Another concern is the dental equipment. While it is being satisfactorily maintained now, attention should be called to the fact that most of it is 10 years old.

The hospital dental service clinic increased its patient load significantly and is carrying out a much needed service for patients with kidney and heart problems.

Rescheduling of junior students increased clinical usage considerably, resulting in more patient visits, greater opportunities for student learning and increased clinical funds. In addition to providing space for Medical University dental hygiene and dental assisting students, the College accommodated dental assisting students from Columbia, Spartanburg, Rock Hill and Florence for some of their training. The latter effort was in a spirit of cooperation with other institutions in South Carolina to best utilize space and equipment.

Very few alterations could be made to facilities because of the freeze placed on the sale of bonds due to poor market conditions. Plans had called for establishing research areas for two clinical departments. It now appears that the program will go through in 1980-81. The Departments of Operative Dentistry and Periodontics have ongoing grants that dictate provision of additional space.

A thorough selection of courses was offered in continuing education, with programs being presented in Greenwood, Greenville, Columbia, Hilton Head and Charleston. The twenty courses drew 677 participants from 16 states. A survey was carried out in cooperation with the Area Health Education Center (AHEC) to determine what courses dentists throughout South Carolina felt

should be offered to best meet their needs. Among other student activities, Student Clinic Day was reinstituted and the winners took their exhibits to the Thomas Hinman Clinic in Atlanta.

There has been a noticeable decrease nationally in the dental applicant pool, and although the number of applicants for the College of Dental Medicine also decreased below that of prior years, the quality remained good. The Admissions Committee interviewed 110 applicants and admitted 56 students. Vigorous efforts were made to help students find financial assistance through loans, scholarships or jobs.

This was an extremely busy year for the computer section, which continued to produce needed information on applicants and all grades for students. Patient information also is being placed on the computer, enabling staff to follow their needs and progress more efficiently.

Faculty of the College made significant contributions to the dental literature, serving as editors of two books, and providing four chapters in other books and numerous articles in journals. The increase in the number of publications is considered a good indicator of faculty achievement. Also, various departments reworked and rewrote syllabuses used in their courses.

Research increased in clinical areas but was still hampered by lack of space. The Department of Biophysical Dentistry had an extremely good year, receiving grants totaling \$202,844. One of its faculty, Dr. Myron Spector, was made an adjunct professor at Clemson University, while Dr. Francis Cooke of Clemson was accorded a similar appointment here. This exchange illustrates the growing cooperation among state institutions. Dr. Willis K. Mylin received a National Institutes of Health grant for work on a prosthesis for cleft palate patients, and Dr. Robert J. Boackle had a large federal grant approved for studies into the action of saliva.

Of continuing concern is the extent of the gap between the rapidly rising cost of dental materials and the funding provided by the state. Eventually, it may not be possible to purchase all of the supplies needed to operate the clinics properly.

The College was saddened by the death of Dr. Robert Jordan on April 5, 1980.

COLLEGE OF GRADUATE STUDIES

1. Students

TABLE I

A comparison of student application data:

<i>Students</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>	<i>1979</i>	<i>1980</i>
Applying	220	143	172	220	153
Accepted	86	72	41	50	35
Admitted	44	35	25	22	23
Graduated					
M.S.	12	10	10	12	15
Ph.D.	9	4	9	13	10

In keeping with the national trend, the College had significantly fewer applicants in 1979-80 than in the previous two years. To overcome this decrease the Long Range Planning Committee of the College was charged with the development of more vigorous efforts to recruit highly qualified students. As a result, a summer research program for undergraduate college students was started in June, 1980, with twelve students from ten Colleges or Universities participating.

TABLE II

Summer Undergraduate Research Program

<i>Undergraduate Institution</i>	<i>Number</i>	<i>M.U.S.C. Department</i>	<i>Number</i>
The Citadel	1	Anatomy	1
Clemson University	1	Immunology	2
College of Charleston	3	Biochemistry	3
Goucher College	1	Laboratory Medicine	1
Hampden-Sydney College	1	Neurology	1
Mary Washington	1	Ophthalmology	1
Oberlin College	1	Pharmacology	2
Wake Forest University	1	Physiology	1
Wellesley College	1		—
Wofford College	1		12
	—		
	12		

The objectives of the program are to introduce students to biomedical research, to acquaint them with opportunities at the Medical University and hopefully to induce them to apply for admission. Among the twelve students are two who are being considered for the Medical Scientist (M.D./Ph.D.) program. In addition to research experience, the students are participating in a weekly seminar series to expose them to the wide range of problems being addressed by the Medical University faculty and they will present the results of their own research projects at a final session in August. The students and participating faculty will be requested to evaluate the summer internship for strengths and weaknesses.

TABLE III

A comparison of student qualifications for admission.

	1976	1977	1978	1979	1980		
					All Students	On Stipend	Not On Stipend
GPA ...	3.14	3.20	3.20	3.30	2.96	3.45	2.43
GRE ...	1191	1111	1128	1239	1123	1121	1125

Table III shows the overall grade point average and the combined mathematical and verbal Graduate Record Examination (GRE) scores for admitted applicants over the past five years. In 1979-80, applicants are separated into those awarded traineeships and those admitted to the Graduate program without financial assistance.

2. Faculty

TABLE IV

Members of the Graduate Faculty

<i>Departments</i>	1976	1977	1978	1979	1980
Anatomy	17	17	16	19	18
Immunology-Microbiology	15	14	16	18	18
Biochemistry	23	23	21	23	23
Biometry	8	8	6	7	9
Pathology	11	11	9	10	11
Pharmacology	16	17	15	15	15
Physiology	11	12	11	11	11
Other Members	32	35	36	47	51
Total:	133	137	130	150	156

The Graduate Faculty has increased over the last five years as a result primarily of the recruitment of research oriented physicians in the clinical departments (Other Members). This expansion is thus in keeping with one of the basic objectives of graduate education at the Medical University, i.e., the education of scientists for careers in clinical research.

3. Environment

The College in 1977 began a series of efforts directed towards improving the intellectual environment for research. Three major programs have been supported in the series.

a. *James W. Colbert, Jr., Lecture Series*

The Colbert lecture series was designed to provide a forum for Graduate faculty to present the results of their own research to the University faculty so that wider knowledge of the research effort at the Medical University might be disseminated. In 1979-80, three Colbert lectures were sponsored by the College:

Dr. Raymond Lund—Professor and Chairman, Department of Anatomy

Dr. John Marchalonis—Professor and Chairman, Department of Biochemistry

Dr. Norman Bell—Professor of Medicine and Pharmacology

The University Colbert lecture, given by an outstanding internationally recognized scientist, was presented by Dr. Victor A. McKusick, Johns Hopkins University.

b. *The Visiting Professor Program*

In 1978, as a means of increasing communication between University faculty and students and the larger scientific community in the United States and abroad, a visiting professor program was initiated. In 1979-80, the following professors visited the Medical University to present a seminar and to interact on an individual basis with students and faculty of the College:

1. Dr. Murray Rosenberg (University of Minnesota) Molecular and Cellular Biology and Pathology (M.C.B.P.) Program
2. Dr. Asit Basu (University of Missouri) Biometry
3. Dr. Regis Kelly (University of California, S.F.) Anatomy
4. Dr. Bo DuPont (Sloan Kettering Inst.) Immunology-Microbiology
5. Dr. Robert Allen (Dartmouth) M.C.B.P. Program

6. Dr. Hugh Robertson (The Rockefeller University) M.C.B.P. Program
7. Dr. Alain Privat (The University of Paris) Pathology
8. Dr. Francis C. Crick (Kieckhefer Research Professor, The Salk Institute) College of Graduate Studies

4. Postdoctoral Fellowships

The College of Graduate Studies sponsored seventeen postdoctoral trainees during the 1979-80 fiscal year.

TABLE V

<i>Title</i>	<i>Number</i>
Pathology	1
Neurology	3
Biochemistry	2
Medicine	1
Laboratory Medicine	1
Immunology-Microbiology	5
College of Pharmacy	1
Anatomy	2
College of Dental Medicine	1

Each postdoctoral award is accompanied by a requirement that extramural support for subsequent training must be sought. It is anticipated that such a requirement will stimulate an increase in the number of extramurally funded postdoctoral positions at the Medical University.

5. Student Travel

As an additional means of improving communication between the Medical University and the national scientific community, the College provided travel support for eighteen students to fourteen national meetings where they presented eighteen papers. Participation in these meetings not only exposed the students to the critical environment of professional scientists, but also provided opportunities to further the research image of the Medical University throughout the country.

6. Department of Biometry

The Department of Biometry taught courses in five of the University's six colleges. In total, 43 courses were taught to 513 students: College of Medicine, 1 course, 165 students; Graduate Studies, 27 courses, 123 students; Allied Health Sciences, 3 courses, 96

students; Pharmacy, 2 courses, 23 students; Nursing, 2 courses, 90 students; College of Charleston, 4 courses, 9 students; Summer Internship, 3 courses, 7 students. The department continued the weekly seminar series, sponsoring 15 seminars and 22 visiting lecturers. During the year, the department had 25 graduate students and conferred 3 Master of Science degrees.

A number of consortial activities are being carried out, particularly with the College of Charleston. The five-year program, leading to a baccalaureate in mathematics and a master's degree in Biometry, gained its first enrollment. The work-study career development program with the College of Charleston had three students during the year. The two schools continued to exchange faculty and students. Thirteen students enrolled in the College of Charleston's mathematics courses. An important development was the collaborative effort to establish a joint research program in the field of catastrophe theory. This work has involved faculty of the Medical University, College of Charleston, and The Citadel. The department has been advised that this NSF-sponsored research has been funded for the period 1980-81.

Students of the National Science Foundation (NSF)-sponsored mathematics and computer science program at the College of Charleston visited this campus and Biometry faculty participated in the Governor's Conference for Outstanding High School Students. Three students in the NSF program worked for the department and took courses here during the summer.

With the assistance of an Area Health Education Center (AHEC) grant (\$6,000) and a Burroughs-Wellcome Foundation grant (\$1,000), the department offered a four-week summer minority program for 7 students during June.

In addition, small stipends were identified for undergraduate students seeking summer employment here.

The Department gave one (\$500) Biometry Career Development Award sponsored by the Upjohn Pharmaceutical Company to a rising college senior.

Great progress is being made in research. Programs receiving national and international attention have been established in the following areas:

- Statistical Catastrophe Theory and Its Application
- Modeling of Enzyme Kinetics
- Survival Distributions and Reliability
- Statistical Modeling

Mathematical Models in Decision Making
Pesticides and Heavy Metal Epidemiology
Health Evaluation

The faculty presented 23 papers and authored or co-authored 43 publications and 2 abstracts. In addition, 22 papers are in press and 15 have been submitted. The chairman was editor of Volumes I and II of *Mainland's Notes from a Laboratory of Medical Statistics*.

The Upjohn Pharmaceutical Company sponsored a pre-doctoral fellow, providing \$7,000 for stipends and other student costs. The fellow is permitted to work at regular salary at Upjohn in Kalamazoo, Michigan, during the summer. A mutually interesting research project has been identified through this mechanism.

The faculty has in the past 12 months worked on 186 independent collaborative and consultative projects within and outside the University.

COLLEGE OF PHARMACY

The pharmacokinetic dosing service, implemented in the latter part of the 1978-79 academic year, has become fully operational as a patient service and as a teaching program for Doctor of Pharmacy and baccalaureate students. Additionally, a nutritional support service, operated on a cooperative basis between the Department of Family Medicine and the College of Pharmacy, became an elective option for Doctor of Pharmacy students.

A significant change occurred in the curriculum when the baccalaureate pharmacy students began taking the same pharmacology course as the medical students. Because of this change, a review of the background courses required prior to pharmacology has been undertaken by the curriculum committee.

Unique features of the College's ambulatory care Doctor of Pharmacy specialty were highlighted in an advertisement placed by Eli Lilly and Co. in most national pharmacy professional journals as part of the company's series on the emerging role of clinical pharmacy. It emphasized the excellent facilities and the interdisciplinary nature of the Medical University program.

The college's computer program also continued to receive national recognition. In several articles in pharmacy professional journals dealing with the pros and cons of computer use, the Drug Interaction Data Base developed here was identified as a definite advantage for any system.

The renovation of the third floor of Building F, begun in May, 1979, was completed in April, 1980. The area provides totally reno-

vated classrooms and seminar rooms, faculty offices, a centrally located secretarial and duplicating area, student activities office, graduate student office, and student and faculty mailboxes.

The fourth floor of Building F was also renovated by replacing the ceiling and lights, painting the entire area and reworking the air conditioning. The renovation will allow most of the faculty presently housed in three different areas to be consolidated in one office area for better faculty communication and student accessibility.

The faculty presented 83 seminars throughout the country on all aspects of professional and scientific pharmacy. In addition, 11 local seminars were provided to civic groups on various aspects of drug abuse or poison control. A series of television spots was shown on December 5-7, 1979, on Toxic and Poisonous Plants of the Holiday Season. Sixteen papers were presented at national professional meetings of the American Society of Hospital Pharmacists, American Pharmaceutical Association, International Society of Systems Analysts, and American Society for Parenteral and Enteral Nutrition.

A faculty member was honored by being asked to present a series of lectures on "Pharmacokinetics" to the Royal Academy of Pharmacy of Spain and to the School of Pharmacy, University of Madrid.

Another member, in cooperation with the Health Sciences Consortium, is preparing a six-booklet continuing education program on "Hypertension" under a grant from Ciba Pharmaceuticals. Three of the six booklets have been completed and distributed, free of charge, to approximately 50,000 pharmacists throughout the United States.

Two faculty members coordinated the College's Second Annual Pharmaceutical Development Conference held at Hilton Head. Ninety participants from across the nation attended the program.

Thirteen members of the faculty had a total of 26 articles accepted or published in scientific or professional journals. Two faculty members (C. W. Weart and J. F. Cooper) wrote a chapter in a book, and two (A. W. Karig and E. Hartshorn) had their book, "A Guide to Drug Interactions", published in a German language edition.

Dr. John Hynes had the distinction of receiving research funding from three organizations. He has entered into the second year of a \$70,000 grant from the National Large Bowel Cancer Project and the second year of a \$51,000 grant from the American Cancer So-

ciety. In addition, he received a \$14,000 grant from the World Health Organization.

Dr. Ray R. Maddox received a \$12,000 starter grant from the PMA Foundation to study "Tobramycin in the Neonatal Patient". Working with the Department of Neurology, he also received a \$15,000 grant from Eli Lilly and Company.

In other professional and service activities, Dr. Harold Trammel continued in his consultant capacity to the State Department of Health and Environmental Control for poison and drug information as well as to the Charleston County Emergency Medical Service.

The radioisotope program developed by Dr. James Cooper has been expanded to include nine other hospitals in the Low Country.

Dr. Keith Miller serves as president of the Trident Diabetic Association and Southeastern Society of Hospital Pharmacists.

Dr. Timothy Vanderveen serves as president of the South Carolina Society of Hospital Pharmacists.

Dr. James Cooper serves on the board of directors of the Radiopharmaceutical Science Council of the Society of Nuclear Medicine. He is also chairman of the Specialty Council on Nuclear Pharmacy of the American Pharmaceutical Association.

Dr. William Golod completed a two-year term as president of the Charleston Jewish Community Center.

Dr. Ray R. Maddox is chairman-designate of the special interest group on clinical pharmacokinetics of the American Society of Hospital Pharmacists.

Mrs. Charlene McCants serves on the Town Council of Mt. Pleasant, S. C.

Student organizations were especially active during the year, with Kappa Psi and Lambda Kappa Sigma fraternities recording significant membership increases.

The Student American Pharmaceutical Association's busy calendar included monthly guest speakers on professional and political topics, participation in a Hypertension and Diabetic Clinic in a Charleston shopping mall, and representing the College at the regional and national S.A.Ph.A. meetings.

The senior students again published an excellent edition of "The Cosmian", the College of Pharmacy yearbook.

Sixty-seven students received financial aid totalling \$146,364 during the year.

COLLEGE OF NURSING

With the filling of most key positions, the Graduate Program, funded through an Advanced Nurse Training Grant of the U. S. Department of Health and Human Services, made substantial progress. Appointed were the Assistant Dean and Director of the Graduate Program and department heads of Graduate Maternity Nursing, Nursing of Children, and Nursing Administration. Also, two graduate faculty were employed in the areas of Maternity Nursing and Medical-Surgical Nursing. The College continues active recruitment of a Chairperson of Medical-Surgical Nursing and anticipates filling this position by Fall, 1980. The expected student enrollment in the Graduate Program for Fall, 1980, is fifty students, most of whom will be studying part-time. Application for a Continuation Grant for year 03 has been submitted in the amount of \$203,097 for the period September 30, 1980, through September 29, 1981.

The Bachelor of Science in Nursing (B.S.N.) Satellite Program for registered nurses at Winthrop College in Rock Hill continued to receive funding. A Continuation Grant for year 03 was submitted in the amount of \$191,344 for the period September 1, 1980 through August 31, 1981. A report to the National League for Nursing (NLN) describing the satellite program was submitted in January, 1980, and a letter was received from the NLN in April, 1980, which conferred continued accreditation for this program and the College of Nursing. During the past year there were four full-time, permanent nursing faculty plus a Project Director based at Winthrop College. Enrollment in the nursing course last year numbered twenty-three. There were approximately 40 additional students taking General Education Courses at Winthrop College. College of Nursing faculty on the Charleston campus continued to rotate to the Winthrop College campus in order both to assure uniformity in curriculum and to teach nursing courses on the campus. The first satellite program student graduated during the Medical University's commencement exercises on June 5, 1980, in Charleston.

Additional progress has been made since the College of Nursing signed a "Memorandum of Agreement" with Francis Marion College to develop a Satellite B.S.N. Program on the Francis Marion campus. As with the MUSC-Winthrop arrangement, this proposed program will combine the educational resources of two state institutions on behalf of a segment of the State's nursing population not presently being served. Since there is no Bachelor of Science in Nursing degree program in the Pee Dee Area, a needs study demonstrated the feasibility for submission of a proposal. The pro-

posals was approved by the MUSC Board of Trustees (February 8, 1980) and the State College Board of Trustees for Francis Marion College. The South Carolina Commission on Higher Education approved the proposal May 1, 1980; however, the program has not been funded to date.

Another Special Project Grant Application entitled "B.S.N. Facilitation for Working Registered Nurses" was completed and submitted to the Department of Health and Human Services on June 23, 1980. The purpose of this project is to increase the number of baccalaureate prepared nurses in South Carolina by offering courses in the established B.S.N. curriculum of the College of Nursing to eligible registered nurses at such times as they have access them, e.g., late afternoon, evenings, and weekends. Faculty and administration at MUSC have been concerned each year that the number of registered nurses who qualify for entrance into the baccalaureate program outnumber the spaces available to them. Prospective students will be registered nurses from approved diploma and associate degree programs, holding current licensure to practice nursing. The anticipated annual registration of accepted registered nurses, made possible by the project, is twenty (20) per year. Pending approval and funding, plans are to implement the "B.S.N. Facilitation for Registered Nurses" project in September, 1981.

A grant received from the Southern Regional Education Board and the W. K. Kellogg Foundation to assist registered nurses employed at the Medical University Hospital ended effective November 30, 1979. All nineteen students remaining in the program completed requirements for the Bachelor of Science in Nursing Degree by the June, 1980, commencement exercises.

A new Dean's Lecture Series was initiated this year, which will bring two distinguished nurses to the College each year to interact with faculty and students. In addition, there will be an afternoon lecture which will be open to all registered nurses in this state and adjoining states of Georgia and North Carolina.

The College of Nursing again achieved the highest percentage of graduates passing the State Board Examinations for Nursing of any nursing baccalaureate program in the State. In addition, results from South Carolina testing showed the graduates of the College scored above the South Carolina mean in all five areas tested by the State Board Examination.

All eleven graduates of the Nurse-Midwifery Certificate Program who took the National American College of Nurse-Midwives Certification Examination successfully passed.

Two problem areas related to facilities are identified by students in the College; one is the lack of a Student Union Building. Facilities for social events, dining, conferences, and athletics are inadequate or lacking on the Medical University campus. Much of the College of Nursing student activities fund was spent on renting off-campus facilities. A second concern is the lack of lockers. Students have a need for lockers as the majority of them live off-campus and must bring books, coats, and lunches with them to the College. The clinical areas, especially, lack satisfactory space to store items. This problem has been discussed in the Dean's Student Advisory Committee, however, a solution has not been found as yet because of limited space.

Research efforts in nursing continued to increase during the year. The Research Committee sponsored three seminars aimed at updating faculty knowledge about research in nursing and research resources and funding. These seminars were attended by approximately twenty-five persons. Also, Jacqueline Fawcett, R.N., Ph.D., F.A.A.N., conducted a workshop entitled "Nursing Research and You, Yes You!", attended by some twenty-five faculty and nurses from the community. The research newsletter, *Search*, a semi-annual publication, increased its circulation and many requests for the newsletter were received from individuals and institutions.

During late summer 1979, junior students were allowed to take a required course, Nursing Elective, after successful completion of Nursing Practicum, another required course offered early in the summer. It is significant to note that many students took these courses in distant communities and rural sites, and one student traveled to the Soviet Union. The South Carolina locations included:

Sumter-Clarendon Public Health Department

Beaufort-Jasper Comprehensive Health Care Center

Student Health Coalition, an interdisciplinary team, put on health fairs and did screening in the communities of Olanta, McBee, and Bethune

Loris Community Hospital

Grand Strand General Hospital

Conway General Hospital

Nursing practicum students who took the course in the last three locations were taught by faculty from the University of South Carolina Coastal Carolina College and their salaries were paid by the Area Health Education Center (AHEC). Plans were finalized for seven students to complete N-324, Nursing Practicum, at McLeod

Regional Medical Center in Florence during Summer, 1980. This project has received total financial support from the Pee Dee AHEC. In addition, twenty-six students plan to complete N-324, Nursing Elective, in the communities of Bamberg, Beaufort, Bonneau, and Heath Springs.

Nurse-Midwifery Education Program

Ms. Eileen Hicks, CNM, and Sara Piechnik, CNM, who are on the South Carolina Council on Nurse-Midwifery, are responsible for recruiting nurse-midwives for rural areas in South Carolina. They traveled to several areas in the state talking with private physicians, trying to develop sites for certified nurse-midwives to be employed in the state. Some communities showing interest were Kingstree, Hemingway and Winnsboro.

A change was made in the next admission date for certificate students in Nurse-Midwifery from August, 1980, to January, 1981, and thereafter every January. Students in the graduate program in Maternal-Newborn Nursing: Track I—Nurse-Midwifery will continue entrance in August and will begin clinical Nurse-Midwifery the following January with the certificate students.

During the year, certified nurse-midwives provided management of antepartal care to women in six clinical sites for a total of 5,492 antepartal visits. In the same period, 476 women were delivered by nurse-midwives. In addition, postpartum and family planning care were provided to many of the women in the nurse-midwifery case load and the non-case load both at Medical University Hospital and outlying clinics.

Continuing Education

In its commitment to provide Continuing Education courses for the registered nurses of the State, the College conducted fifteen programs which drew 1,282 participants. This year sixteen nationally known speakers were utilized as well as twenty faculty from the Medical University and speakers from the Charleston Branch of the American Red Cross, and the South Carolina Heart Association. Offerings were co-sponsored with the Trident Nurses' Association, Sigma Theta Tau-Gamma Omicron Chapter, and the Respiratory Therapy Program of the University. The offerings were fairly evenly divided as to content in nursing-related theory, in clinically oriented theory, and clinical practice. Evaluations by participants of all offerings were excellent. The Director of Continuing Education explored use of the Health Communications Network not only

for continuing education credits, but also for academic credit for courses taken through this medium.

COLLEGE OF ALLIED HEALTH SCIENCES

Educational activities preparatory for various health delivery careers continued in 24 identifiable allied health fields and/or training levels within these fields during the reporting period. Included were 15 Upper Division offerings at the baccalaureate, post-baccalaureate certificate and master levels and 9 Lower Division efforts at the one-year or two-year certificate levels.

Upper Division programs continued to strengthen the longstanding cooperative recruitment and admissions system established with other accredited postsecondary institutions, colleges and universities, primarily throughout South Carolina. These institutions enroll prospective health careers applicants for the purpose of providing the first two or more prerequisite general college years and then cooperatively work with College of Allied Health Sciences (C.A.H.S.) personnel in competitively placing qualified students into the final clinical health professions portions of the involved curriculums. This system continued to encourage broad "across the State" access to these, as yet, unduplicated health education programs, obviously eliminating the need to duplicate costly faculty positions, equipment, supplies and physical plant facilities at other State locations.

Under conjoint arrangements with Trident Technical College, both institutions shared equally in activities and responsibilities associated with the Lower Division programs, again in a cost effective manner by utilization of existing physical plant facilities, equipment, faculty and available supplies. Graduates of these one and two-year programs each received a clinical certificate from the C.A.H.S. and the appropriate associate degree or diploma from Trident Tech.

Several new developments, significant in terms of possible statewide impact, occurred during the year. Such changes were calculated as being necessary to meet identified State needs. One, the formal organization of a long planned Nuclear Medicine track in the Radiologic Technology Baccalaureate Program, took place in the fall. As a cooperative effort between the College, the Department of Radiology and the Medical University Hospital clinics, existing facilities, personnel and other supportive elements allow the post-certificate radiographer seeking a baccalaureate degree the opportunity for obtaining additional specialized clinical training.

The possession of a multi-competency background with registry opportunities in nuclear medicine as well as diagnostic radiography make this potential graduate very valuable and most attractive to hospitals and clinics, especially in smaller communities. Likewise, this unique training opportunity has created an aggressive applicant interest that is already allowing competitive selection of quality persons for this sensitive professional health service. South Carolina has over the past decade increasingly experienced identified personnel shortages in meeting growing nuclear medicine needs. This track should soon help alleviate this condition by providing a small number of well trained, quality level graduates on a yearly basis.

In response to requests from around the entire State and in support of the statewide Allied Health Taskforce recommendations, the C.A.H.S. graduate program (Master in Health Sciences) began offering a limited number of courses in an off-campus location in the Greenville/Spartanburg area. This primarily evening-weekend hours effort is intended to meet the needs of higher level (mostly supervisory) allied health practitioners in the upper part of South Carolina. These persons, desirous of graduate education, cannot just pick up and leave their hospital and clinic jobs to come to Charleston for two years or more. As the sole graduate allied health program in the State, the only possible immediate solution was to take the courses to where the need existed. A total of 27 part-time students enrolled in the first course offered, with all indications of a sizeable increase this fall based on expressed interest. This number uniquely compares to the on-campus Charleston area enrollment this past year in the Master's Program of 37 part-time students, again primarily partaking of late afternoon-evening and weekend offerings. In both locations, University-approved cost recovery procedures have moderated the need for the University and State to increase supportive fundings.

The College also sponsored its first interdisciplinary student teams during the past Maymester. Two teams consisting of mostly allied health students, but with a limited number of nursing and pharmacy participants, went out to several small town-rural settings and visited and participated with ongoing health services personnel at those sites. The students were extremely well received by citizens and health practitioners, made excellent future contacts, and returned to Charleston much more appreciative of small town-rural South Carolina health delivery services as well as needs. All indications are that this student team program will grow

because of mounting interest shown by all parties and that the results will be the "spanning of a real gap" that has existed through the years in stimulating Upper Division graduates to locate in these settings.

A long planned and pursued program designed to more appropriately sensitize health professions students to humanistic needs and concerns of the citizens was partially initiated this year through a new humanities "core" course that was formally offered on credit basis for the first time. Backed by a team faculty effort utilizing Medical University and College of Charleston personnel, an interdisciplinary group of students elected to take the course and subsequently experienced very worthwhile and thought provoking sessions. The course was judged successful, therefore, it is the intent of the College to expand on and improve this effort. As a culmination of several years of study and deliberation on how to accomplish the successful introduction of the humanities in the training of clinicians, this College's project might well serve as a prototype for other health colleges and institutions to adopt.

During the past year, faculty members and other supporters of the College raised the corpus necessary to provide, through yearly interest, two academic scholarships intended to attract potential quality applicants to allied health programs. The first awards should be made known during the final phases of the admissions process for the incoming 1981 class. A significant contribution by Dr. A. Pappas deserves special recognition. Dr. Pappas honored the memory of his deceased wife, Ann Pappas, in this manner. Several C.A.H.S. and University faculty and staff members have also contributed to this continuing drive to provide scholarship funds.

An Honor Society for the College was organized during the year. Nineteen alumni were recognized for outstanding scholarship and other high attainments while at the University and were inducted as the first members of this Society.

College faculty members and programs were active in providing continuing education offerings during the past year. Nineteen such efforts were sponsored or co-sponsored both locally and throughout the State and Nation. During the same period, six faculty members of the College received advanced degrees on completion of formal educational programs and at least seventeen faculty members were pursuing advanced degrees to enhance their careers.

Faculty members also participated directly in their various professional societies and organizations, both locally and nationally. Several held local and national offices during this period, inclusive

of several State presidencies. College faculty exert very obvious and positive effects on their professions to the extent that they have generally assumed leadership roles on both local and State levels.

UPPER DIVISION PROGRAMS

Anesthesia for Nurses (Advanced Certificate)
Cytotechnology (Baccalaureate and Advanced Certificate)
Dental Hygiene (Baccalaureate)
Extracorporeal Circulation Technology (Baccalaureate and Advanced Certificate)
Medical Record Administration (Baccalaureate)
Medical Technology (Baccalaureate)
Occupational Therapy (Baccalaureate)
Orthoptic Preceptorship (Advanced Certificate)
Physical Therapy (Baccalaureate)
Physician's Assistant (Advanced Certificate)
Radiologic Technology (Baccalaureate)
 Diagnostic Radiology Option
 Radiation Therapy Option
 Nuclear Medicine Option
Respiratory Therapy (Baccalaureate)
Master in Health Sciences (Graduate)

LOWER DIVISION PROGRAMS *

Dental Assisting (Associate)
Dental Laboratory Technology (Associate)
Histologic Technique (Diploma)
Histotechnology (Associate)
Medical Laboratory Technique (Associate)
Ophthalmic Technician (Associate)
Practical Nursing (Diploma)
Radiologic Technology (Associate)
Respiratory Therapy (Associate)

* Trident Technical College co-sponsors all Lower Division Programs.

OFFICE OF UNIVERSITY STUDENT PROGRAMS

Culminating a year of extensive study by a Long Range Planning Committee Task Force on Student Housing, an Ad Hoc Committee was established to make the Task Force recommendations operational. As a result, an application for a \$5,000,000 federal loan has been filed to fund construction of a 200-unit apartment complex.

Additionally, this office's housing listing service expanded its activities. This service lists available housing in the student price range, lists students seeking roommates to share housing, and other information. A staff member has been assigned to aggressively solicit listings, follow up, and keep listings current.

Cooperative arrangements with The Citadel and the College of Charleston are essential to the success of the extensive intramural and recreational athletic programs. There are also good working relationships with the City of Charleston's Department of Leisure Services for the use of athletic facilities.

The Student Affairs Committee of the Charleston Higher Education Consortium is working toward more joint activities in the area of student activities and staff development. This committee produced a grant proposal last year (submitted to the Fund for Improvement in Post Secondary Education) for funds to support a Consortium Student Personnel Staff Development Program. Although the proposal was not funded, there seems to be a commitment on the part of the member institutions to implement staff development programs within the limits of available resources.

The College of Charleston and the Medical University co-sponsored a Community Concert Series again last year. The purpose of this effort is to provide quality cultural activities for students, faculty and the community. Next year, the two institutions will affiliate with the older Charleston Concert Association in an effort to accomplish the same ends at a lower cost.

The MUSC Film Group, sponsor of the excellent Saturday Night Film Series, added two other projects to this year's events. The Film Group did a film series in conjunction with Spoleto. In cooperation with the College of Charleston, and with a grant from the South Carolina Arts Commission, the Film Group sponsored an Independent Filmmakers Series, bringing filmmakers here to show and discuss their art. This series was inexpensive (\$1 admission) and open to the community in addition to the students at

the sponsoring institutions. The Film Group has drawn high praise for its expertise and excellent programming.

The Phi Chi Medical Fraternity was reactivated, after a hiatus of three years, and lists approximately 70 members. The fraternity provides additional activities for medical students, holds occasional all-university social events in conjunction with the Student Government Association, and lends the fraternity house to student groups from all MUSC colleges for meetings and social events.

A very popular program this year was the "Brown Bag Concerts." Each Thursday noon, musicians from the Charleston Symphony performed in the Basic Science Auditorium. Students, faculty and employees could come and listen to the concert while eating their "brown bag" lunches. In addition to playing, the musicians would discuss the music, music history and details of the various musical instruments.

In the area of educational support services, programs were developed in collaboration with students and a staff member in the Office of Educational Services to improve study and memory skills.

Counseling visits with the Director of Student Programs increased dramatically, generally encompassing the areas of personal counseling, interpersonal relationships, and academic or career matters.

Student Financial Aid

For the Financial Aid Office, this academic year was the most challenging in some time. The number of applicants and the dollar volume of financial aid requests were (and continue to be) at an all-time high. The plight of the applicants was indicative of the economy in general. Reductions in federal health funding and changes in federal eligibility criteria required considerable explanation, and this, coupled with increased requests for aid, resulted in a heavy work load for the office. A site review by the Federal Government of all campus-based aid programs did produce a very positive report on this institution's handling of assistance.

Throughout the year, the staff of the Financial Aid Office was involved in many professional activities, holding offices in national and state professional associations, serving as program coordinators for annual meetings, and as teaching consultants to various organizations and workshops.

During the academic year, the financial assistance made available to Medical University students from all sources exceeded \$5.5 mil-

lion. The unduplicated count of number of students helped was 1,002. The largest amounts of money were from loan sources and federal, state and county contractual scholarships. Grant assistance continues to be extremely limited and the need to generate more private scholarship and loan funds is becoming critical.

The following is a summary of funding levels:

University Loan Sources (Federal, institutional) ..	\$ 604,809
University Grant Sources (Federal, institutional) ..	310,900
Outside Loan Sources (approximate)	2,649,900
Contractual Scholarships (County, State, Federal)	895,673
Graduate Stipends, University Employment, College Work Study, Veterans Benefits, misc.	1,080,164
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Total	\$ 5,541,446

UNIVERSITY REGISTRAR AND DIRECTOR OF ADMISSIONS

With the projected installation of a new University computer, a number of new programs have been written and tested for on-line acquisition and updating of the student information system. The long range capabilities of such a system will allow for placement of inquiry terminals in each college. The ultimate goal is to eliminate duplication and replace flow of paper documents from office to office. Additional terminals will be required, a cost analysis indicating that the gain on turn-around time will provide savings to offset their cost.

The Education Services Departments are making increased use of the data bases. Registration data are provided for the new billing system used by the Student Accounts Receivable Office, and the data base is available to the Financial Aid Office for administering scholarships, loans, and grants. Centralization of Veterans Affairs records, including those of House Staff, has benefited both the State and Federal certification offices.

The microfilming of students' records continued as a major project with the assistance of the University Records Management Section. A new microfilm reader/copier was purchased which will substitute for the use of hard copy. Storage of files in a secure fire-proof location remains a priority request. The importance of microfilming was underscored by a fire which broke out in the Continuing Education Building during a winter storm. Fortunately, the

records had been microfilmed and computer stored, and therefore, staff was able to produce a transcript showing dates of conferences and credits earned.

Changes in teaching programs and the addition of the fourth year Dental class led to a reevaluation of teaching space. Assignment of teaching space and curriculum changes also continued to require evaluation. The calendars of Charleston Consortium Institutions have received increasing attention, and through closer co-ordination, the interchange of students has improved.

College of Graduate Studies	
Master of Science	21
Doctor of Philosophy	82
TOTAL	103
College of Medicine	
First Year	105
Second Year	108
Third Year	105
Fourth Year	150
TOTAL	468
College of Dental Medicine	
First Year	50
Second Year	50
Third Year	50
Special Students	1
TOTAL	151
College of Pharmacy	
Baccalaureate Program	
Third Year	57
Fourth Year	60
Fifth Year	53
TOTAL	170

**MEDICAL UNIVERSITY OF SOUTH CAROLINA
ENROLLMENT
1979-80**

House Staff

Interns—Medicine	96
Residents—Medicine	280
Residents—Dental Medicine	26
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TOTAL	402

College of Graduate Studies

Master of Science	21
Doctor of Philosophy	82
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TOTAL	103

College of Medicine

First Year	165
Second Year	166
Third Year	165
Fourth Year	159
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TOTAL	655

College of Dental Medicine

First Year	56
Second Year	56
Third Year	55
Special Students	1
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TOTAL	168

College of Pharmacy

Baccalaureate Program	
Third Year	57
Fourth Year	69
Fifth Year	53
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TOTAL	179

Doctor of Pharmacy (Pharm. D.)

Fifth Year	11
Sixth Year	14
TOTAL	25

College of Nursing

Master of Science in Nursing	32
Baccalaureate Program	
Second Year	78
Third Year	105
Fourth Year	103
Special Students	19
TOTAL	338
Nurse Midwifery Program	5
TOTAL	343

College of Allied Health Sciences

Master in Health Sciences	27
Baccalaureate Programs	219
Special Students	2
Associate Degree Programs (Joint Programs with Trident	
Technical College)	187
Certificate Programs	149
TOTAL	584
Unclassified	31
TOTAL ENROLLMENT	2,490

MEDICAL UNIVERSITY OF SOUTH CAROLINA DEGREES AND/OR CERTIFICATES CONFERRED

1979-80

House Staff

Certificate

Residents—Medicine	118
Residents—Dental Medicine	14
Interns	40
	<hr/>
Total	172

Graduate Studies

Doctor of Philosophy	10
Master of Science	15
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Total	25

Medicine

Doctor of Medicine	155
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Dental Medicine

Doctor of Dental Medicine	1*
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Pharmacy

Doctor of Pharmacy	9
Bachelor of Science	52
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Total	61

Nursing

Bachelor of Science in Nursing	110
Nurse Midwifery Certificate	11
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Total	121

Allied Health Sciences

Master of Health Sciences	3
Bachelor of Science	
Cytotechnology	4
Dental Hygiene	15
Medical Record Administration	14
Medical Technology	19

* Because of the Dental School's return to the four-year curriculum, there was no regular graduating class this year. Only one student graduated.

Occupational Therapy	8
Physical Therapy	13
Radiologic Technology	9
Respiratory Therapy	8
	—
Total	93
Certificate	
Anesthesia for Nurses	7
Cytotechnology	5
Orthoptics Preceptorship	0
Physician's Assistant	22
Dental Assisting	21
Dental Laboratory Technology	15
Extracorporeal Circulation Technology	1
Histologic Technique	7
Histotechnology	8
Medical Laboratory Technique	10
Ophthalmic Technician	6
Practical Nurse	49
Radiologic Technology	13
Respiratory Therapy	8
	—
Total	172
Total Graduates	800

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

During the fiscal year, the University received a total of \$9,669,253 in external funds for direct costs in research and sponsored programs. These awards, in turn, resulted in approximately \$1.2 million of indirect funds for the University.

What has been heartening is the continued increase in federal support for research despite budgetary tightening at the national level. Similarly, support from federal contracts has increased significantly. This latter increase coincides with the policy of many federal agencies of focusing an increased fraction of funds toward targeted programs. Such support can be very important when it complements ongoing research programs.

While substantial gains continue to be made in research and graduate training, total federal support for training has declined because of two factors, the phase-out of the Area Health Educa-

tion Center program (AHEC) and the expiration of Special Improvement Grants in the Allied Health Sciences. Three years ago AHEC was supported in the amount of \$2.7 million. This year the amount dropped to \$1.5 million, with \$750,000 projected for next year, and cessation of support in 1981-82. Similarly, in 1976-77 the University had received \$561,000 in Special Improvement Grants. Meanwhile, over a period of several years there has been a 25 percent increase in support for research training and clinical graduate training. There are now four active institutional research training grants, with two more pending review. Extramural funds for clinical graduate training have also reached a new high.

With ever tightening federal support, increased attention has been given to private sources of funds. Of particular note is the emerging emphasis on the role U. S. industry may play in the future of academic research. The federal government has taken several steps to encourage the participation of industry. The National Science Foundation has initiated a new program for stimulating joint research proposals by university-industry partners. Legislation is currently being enacted to develop cooperative technology centers to be supported by the Office of Productivity and Innovation in the Department of Commerce. Bills have also been introduced to develop cooperative centers under other agencies of the government. In addition, there are several tax options being considered by congress to also encourage financial support of universities by industry. Since the University already has established relationships with many industries which currently support research and development, special efforts will be made by the Research Office to encourage further support in keeping with the emerging legislation.

Another item drawing closer attention is longer range funding. In the past, National Institutes of Health study sections and review groups have arbitrarily recommended that programs not be funded for longer than three years, except for program projects and training awards. The trend today within these groups is to consider four to five years of support, especially for renewal applications. Planning for longer range programs in grant applications should ensure greater stability of research efforts.

The Research Office played a significant role this year in the development and distribution of the revised "Patent Policy Statement." Staff support was provided for the newly reorganized Committee on Patents and the preparation of an application for an In-

stitutional Patent Agreement with the U. S. Department of Health and Human Services. These efforts are designed to promote efficient technological transfer from the university to industry and, ultimately to society, and should serve to encourage general support for research at the Medical University.

The application for the Institutional Patent Agreement has been approved, permitting the Medical University to retain titles to patents on those inventions made during the course of federally-sponsored research. This is a major step forward in the promotion of a patent program at the Medical University. The faculty should now feel much more inclined to consider the patentability of their research findings, and to disclose these findings to the Committee on Patents for processing.

The Research Office has also introduced the possibility of establishing a Patent Depository Library at the Medical University. This has led to a cooperative effort with the Medical University Library and the Drug Science Foundation to purchase copies of patents in the broad category of "chemical" patents and properly store them for use by the faculty. Such a facility would provide a unique resource of scientific research material as well as enable faculty members to make an initial determination regarding the patentability of their discoveries. Negotiations with private firms which produce the patents on microfilm are now underway.

Good indicators of research productivity are the number of extramural awards and principal investigators being supported. This year the University received 177 extramural awards compared with last year's 118, and the number of principal investigators grew from 83 to 114.

University Research Committee

The University Research Committee was reorganized during the year and undertook a major reevaluation of goals and methods to achieve the best possible research productivity. One of its actions was to revise the Guidelines for Institutional Support. The two-class designation for faculty applications was eliminated, so that now all faculty members can compete equally for available funds based upon the guidelines. This provides the seasoned investigator the same opportunity to develop a new area of research as a new young investigator.

The committee made itself available throughout the year to provide more timely review of applications. Meeting on 11 occasions,

the committee reviewed 120 applications of which 63 were recommended for funding. This was in contrast to the previous year when 76 applications were received in May of which 40 were funded. A detailed scientific critique was provided each applicant subsequent to the review.

To assist chairmen in recruitment, the Committee now will review applications from prospective faculty members. The recommendations and critiques from these reviews should prove valuable to the Chairman, and further, successful applicants would have funds available upon arrival at the University.

The essential role of scientific instrumentation in the development of research was reviewed by the committee. A recent Higher Education Panel Report showed that over 50 percent of the 1977-78 expenditure for research equipment within the nation (\$280 million) was used for research instrumentation in the life sciences. This compared with only 19 percent for engineering research and 16 percent for the physical sciences. The report documented the fact that research programs in life sciences require significantly more equipment funds than other disciplines. Secondly, it pointed out that the federal government finances only 59 percent of the scientific research equipment at public institutions. Since it is especially difficult to obtain federal funds for equipment costing over \$20,000, public institutions have to make a major commitment to the purchase of research equipment from internal funds. To this end, the committee requested applications for major institutional research equipment and recommended support for the purchase of seven items receiving the highest priority.

University Research Advisory Committee

An Advisory Committee has been organized to review current policies and practices of the University which have an impact on research and training and make recommendations for changes or clarifications where appropriate. These recommendations will be addressed via appropriate channels to the Deans, Vice Presidents, President, or Board of Trustees.

The committee was organized in November, 1979 and meets each month. The members were divided into six sub-committees to address current issues: (1) Research Space Planning and Utilization, (2) State Support for Research, (3) Strengthening Interaction between Basic Science/Clinical Research, (4) Use and Recovery of Indirect Costs, (5) Strengthening Non-Federal Research and Training Programs, and (6) Improving Research Support Services.

Progress has been made in several of these areas during the past six months.

It was recognized that most professional personnel funds requested on applications for extramural support did not correspond to the percent effort being committed to the program. This difference represents a cost sharing of funds by the University. A study of all active awards showed this cost sharing to be approximately \$1.5 million per year. To clarify this issue, a Guideline for Extramural Support was developed.

The use of state support for the salaries of research technicians was reviewed and evaluated. It was concluded that most of the state-supported technicians provide core support for institutional research and clinical facilities, teaching and training, as well as new investigator development. University policy was reviewed which outlined that no state-supported technician should provide permanent support to a single investigator and that the assignment of each technician should be continually reviewed by the Department Chairman and the Dean to assure maximum utilization and benefit.

The Subcommittee on Use and Recovery of Indirect Costs proposed a plan for the use of Indirect Costs recovered by the University. It recommended that "... a formal plan to use indirect costs as an incentive to departments and investigators would be very beneficial in generating and developing new funds for research and sponsored programs." It was noted that most other universities now use part or all of their indirect costs funds for this purpose.

The Committee initiated action in a third area, strengthening the support from Non-Federal Research and Training Programs. The Subcommittee is developing recommendations for guidelines to delineate the role of the Health Sciences Foundation and the University for accepting and administering external funds. For funds which are administered by the University, the Subcommittee will develop recommendations for the minimum form of an agreement between the source of funds and the University, i.e., patents, data use, copyrights, indirect cost, and work scope format. Once these recommendations have been completed, reviewed and approved by the University and the Health Sciences Foundation, they should provide guidance as well as incentive to all investigators seeking to develop non-federal sources of funds.

Institutional Review Board for Human Research

The Board conducts initial and continuing review of all research, training, fellowship and demonstration proposals, and projects involving human subjects. It determines that the benefits outweigh the risks involved; that the rights and welfare of subjects are protected; that legally effective informed consent is obtained by appropriate methods, and that the activity is reviewed at timely intervals. The scope of its program has grown considerably, from 90 reviews per year to 348 this past fiscal year.

Shortly after the close of the year, the Investigation New Device regulations from the Federal Drug Administration become effective. These regulations give Human Research Boards responsibility of determining safety and effectiveness of all new devices which may come up for review before submission of any information to the Federal Drug Administration. The Office of Protection from Research Risks has advised all investigators in biomedical and behavioral research to perform careful screening of normal volunteers prior to participation.

OFFICE OF EDUCATIONAL SERVICES

Assistance was provided to faculty from all colleges of the University, the Division of Continuing Education and the University Extension Services in the development of instructional materials directly related to the organization and function of their courses. The effort involved sixty-seven instructional units, many consisting of several sub-units. The Office also gave consultation to faculty from the College of Charleston and The Citadel.

The Personalized Assessment of Course Effectiveness (PACE) system continued to attract additional interest, the number of courses utilizing PACE increasing by 22 percent over the previous year. Members of the Office also assisted in the evaluation of other courses which chose to use systems other than PACE.

The Office continued to coordinate the evaluation of all senior electives for the College of Medicine.

The Office of Educational Services administers the Student Examination Evaluation Program (SEEP) which is available to all faculty and processed by the Computer Center. A high-capacity optical scanner "reads" test answer forms directly. Scoring and test analysis are computer-managed. During the academic year, approximately 60,000 test papers were scored by SEEP, an increase

of 20 percent over 1978-79. An extensive report for each test was generated for the instructor and included student scores, test statistics, and item analysis. Detailed information about the system is made available to individuals and departmental groups upon request, as well as in seminars open to all faculty. Two such seminars were presented this year.

The staff taught credit courses for the College of Allied Health Sciences Master's program during the summer and spring quarters. A total of 51 students were involved. It also assisted in the teaching of a required course in educational methodology for the Dental Hygiene, Radiologic Technology and Physical Therapy students. A series of six two-hour seminars on instructional methodology was provided for residents in the Periodontology and Prosthetics Departments of the College of Dental Medicine. For the first time, the Office provided a Learning Skills Program for students and faculty. There were 87 students and 5 faculty participants. This program will be expanded in 1980-81.

A series of workshops and seminars in educational methodology/teaching was conducted for university faculty. This year, the emphasis was on providing activities for departments, sections or other small groups based on their specific interests. The Office has completed needs assessment/interest surveys with three of the colleges and two more are in progress.

The staff continued to provide the University's Division of Continuing Education with regular assistance in program evaluation and development, and assisted University Extension Programs in development of continuing education programs involving micro-computers, the Apple Project.

Division of Audiovisual Production

The Division continued to show steady growth, surpassing its projected intra-institutional transfer revenue goal of \$128,000 by \$19,787.

Relative to major equipment purchases, the new sound booth purchased last year is now fully equipped. Also, a Forox copy camera was acquired at the beginning of the year and has enabled the Photography Section to keep pace with the ever increasing demand for copy material. Five new fully equipped darkrooms were installed and completed in the Summerall Center.

During the fiscal year, the Photography Section relocated in the Summerall Center. Increased space, new facilities and updating

much of the equipment have resulted in a higher standard of photographic production. The photographic studio and Audiovisual Store have remained in the Hospital and that area is primarily used for the pickup and delivery of photographic work.

All Television Section personnel and equipment were transferred to the Division of Continuing Education on May 1, 1980.

Members of the Illustration and Design Section received three awards in the annual Advertising Federation of Charleston competition.

LIBRARY AND LEARNING RESOURCE CENTER

The dependence on supplemental appropriations for collection development over the past few years has caused some planning problems. The acquisitions budget, which reached a high of \$355,422 with supplemental funding in 1978-79, dropped to \$285,509 in 1979-80 resulting in restrictive purchasing policies.

The Library continued to be one of the more active members of the Southeastern Regional Medical Library Program (SERMLP) and received \$5,935.25 for services provided to the member libraries. Preliminary work was completed for a list of the Library's journal holdings produced in cooperation with the University of South Carolina School of Medicine Library.

A total of 71,849 books and journals circulated, an increase of 541. Nursing, psychiatry and neurology books continued to be the most heavily used.

The reference staff answered 4,520 extensive and ready reference questions, a 17 percent increase. A total of 6,228 computerized searches was executed on the NLM and BRS data bases, an 11 percent increase over the previous year. MEDLINE accounted for 80 percent of the searches. There were 1,698 subject searches executed on MEDLINE, a 25 percent increase.

The Interlibrary Loan and Extension Offices combined efforts to produce 14,663 transactions. The Interlibrary Loan Office provided 8,890 monographs, journals or photocopies of journal articles throughout the state and the nation, a 10 percent increase. Of these, 6,013 items went to South Carolina borrowers, a 29 percent increase. A total of 1,766 items was borrowed for Medical University patrons, a decrease of 41 items.

The Extension Office provided 3,259 monographs, journals or photocopies of journal articles to South Carolina health practi-

tioners. A total of 541 MEDLINE searches, 265 extensive and ready references and 8 consultations were made by the Extension Librarian. There was a slight drop in activity probably because of the University of South Carolina School of Medicine's developing role and the addition of access to MEDLINE at several of the Area Health Education Centers. There were 131 first-time users of the Extension services.

A guide to Medical University indexes and abstracts was prepared by Mr. Robert Poyer and distributed to the faculty.

The Library staff consulted with 26 institutions and individuals in the state, region, or nation and participated as instructors in six workshops on state through national levels.

The Technical Services Department has acquired the equipment necessary to begin active participation in the Southeastern Library Network (SOLINET). Detailed plans for the retrospective conversion of present holdings, and the inclusion of the Waring Library's holdings into the main catalog are now being drafted.

A number of the library staff was given special responsibilities in state, regional and national associations.

P. Fields—Nominating Committee of the Health Sciences OCLC Users Group

A. Kabler—Chairman, Southern Regional Group of the Medical Library Association

Extension Coordinator's Committee of the Southeastern Regional Medical Library Program

Federal Relations Committee of the South Carolina Library Association

Grievance Committee of the South Carolina Library Association

V. Miller—Nominating Committee of On-Line Users Group of the South Carolina Library Association

J. Nichols—Committee on Patient Education of the Southeastern Regional Medical Library Program

W. Sawyer—Member of the Executive and Grants Committees, and chairman of the Audiovisual Committee of the Southeastern Regional Medical Library Program

Biomedical Library Review Committee of the National Library of Medicine

LIBRARY AND LEARNING RESOURCE CENTER STATISTICS—1979-1980

Holdings:

Total Holdings*, June 30, 1979	128,117
Added, 1979-80	6,774
Withdrawn, 1979-80	122
Total Holdings*, June 30, 1980	134,769
Periodicals Currently Received	2,330

Number of Interlibrary Loan Transactions:

Incoming	1,766
Outgoing	12,897
Total	14,663

Circulation:

Journals	33,719
Monographs	37,589
Audiovisuals	1,772
Total	73,080

Budget:

State Appropriations—Library	\$777,423
LRC	92,617
Total	\$870,040

* Monographs, bound journals, audiovisual packages.

WARING HISTORICAL LIBRARY

Work on the physical condition of the rare books was the major project of the library staff during the year. Leather bound books were treated first with a leather protector and then with the British Museum leather dressing, a time-consuming operation, but one that is approximately two-thirds complete. An on-going project is the removal of first-aid repair work with tape, which was done a number of years ago, and the placing of books in acid-free folders or covers for perhaps future rebinding. With the help of Waring Library Society funds, about thirty books were expertly rebound or rebaked during the year, a good start on work that has been needed for many years.

Some 71 books were purchased for the library collection this year using approximately \$900 of library funds, \$400 of Waring Library Society funds, and an exchange for duplicates. About 100 books were donated to the library during the year. Other gifts of

note were several early diplomas of the Medical College, two early photographs of anatomy classes, a scrapbook of newspaper clippings and the writings of Dr. Horace G. Smithy, Jr., (1914-1948), the papers of Dr. Harry S. Mustard (1888-1966), and an early defibrillating machine. A detailed listing of acquisitions and gifts is placed quarterly in *Library Notes*.

Fifty-eight researchers used the library's resources during the year, and the curator answered fifty letters of inquiry and many telephone calls. Some of the subjects researched were the history of dentistry in South Carolina, Revolutionary physician friends of David Ramsay, black women in the health sciences, and Florida physicians who were graduates of this Medical College. The Waring Library lent material for two exhibits at the Gibbes Art Gallery, a showing of the artistic works of Edward I. R. Jennings, who had designed the program for the Centennial Celebration of the Medical University in 1924, and a recent pictorial exhibit sponsored by the College of Charleston on "Black Charleston in Slavery and Freedom." A photograph of the library's models of the brain dating from 1832 was on the cover of the December, 1979, issue of the *Southern Medical Journal* and an article on the library was in the March, 1980, issue of the same journal. The photographs and notations on the covers of *Library Notes* were also furnished by the Waring Library.

Dr. Frank Bradway Rogers of Denver, Colorado, former director of the National Library of Medicine and Librarian Emeritus of the University of Colorado Medical Center, came to Charleston in March as a Visiting Professor in the History of Medicine and consultant to the Waring Library. His report recommended making the Waring Library more of an integral part of the main library and the collection a history of the health sciences rather than a collection of rare books. He suggested using the South Carolina Room in the main library as a Waring Library annex, a temporary solution for space problems, and he also suggested a plan for recataloging the collection.

Exhibits were changed periodically in various locations within the Medical University. Of special interest was the loan of an exhibit by Dr. Tracy D. Gage of Lubbock, Texas, in celebration of the centennial of the graduation in 1880 of his grandfather, Dr. Henry Tracy Ivy. The exhibit will later be permanently housed at the University of Texas Medical Center in Galveston.

The Waring Library Society had a second successful year with a membership of 196. A bronze relief portrait of former director Dr. Joseph I. Waring was unveiled and dedicated in October of 1979, and Dr. F. B. Rogers was the guest speaker at the Annual Meeting in March. A History of the Health Sciences Essay Contest was established this year to stimulate interest among the students, and is expected to become an annual event.

STUDENT-EMPLOYEE HEALTH SERVICES

Health Services is in the process of setting up a recall system of Tuberculin Skin Testing for hospital employees who are in patient contact. Hospital employees with previously positive Tuberculin Skin Tests will receive notices every three years for a Chest X-Ray. The cooperation of the supervisors and department chairmen will be sought to ensure their employees report to Health Services. An additional clerical employee will be required to carry out this major notification system.

The Student Health Fee, which has remained at \$15 a year for some time, will be increased to \$51 next fiscal year. This increase is necessary in order to continue funding the salaries of three staff nurses which had formerly been state funded.

During the fiscal year, a total of 16,422 outpatient visits was recorded, a drop from the previous year's 18,994 visits. Students accounted for 6,742 visits; employees, 9,034; visitors, 33; and private Obstetrics-Gynecology and Primary Care patients, 646 visits. Of the total, 2,354 visits were made after regular working hours, on weekends, and holidays. The Hospital Medical Residents saw 267 patients.

There were 490 admissions to the outpatient sick list for a total of 966 sick days for the students.

Of the 1,261 tuberculin skin tests done on students, 32 were initially positive of which 17 were converters. There were 1,484 tuberculin skin tests on employees, of which 55 were initially positive and 2 were converters.

There were 148 lost time accidents causing a loss of 889 days, and there were 34 restricted days lost. All these figures represent a decrease over the previous year. The total number of visits for all service-related injuries was 896.

The Student Mental Health Program, under the direction of Dr. Oliver Bjorksten, provided treatment for 62 students requiring a total of 291 hours of therapy. Starting next September, Health

Services will fund a part-time faculty member to assist Dr. Bjorksten.

There were 18 student hospital admissions for a total of 68 hospital days compared to 20 admissions and 82 hospital days last year.

Total expenditures for the year came to \$299,215.

MEDICAL UNIVERSITY HOSPITAL

Patient Services

The year 1979-80 witnessed major developments in the direction of improved quality of patient care. These developments included the approval by the South Carolina General Assembly of funding for a major expansion of the Medical University Hospital with the addition of the East Wing-Children's Hospital Addition, the negotiation of an agreement with Charleston County to manage Charleston County Hospital, and ongoing negotiations with a private organization to provide a Psychiatric Institute for the Medical University Hospital.

A number of patient services were expanded and formalized over the past twelve months.

The 1 West Treatment Center was opened on November 12, 1979, as an outpatient facility to expand medical services in the community. The facility is used to provide urgent or emergency treatment for patients and visitors of the Medical University Hospital on a 24-hour basis. The facility also serves as a trauma receiving service. Direct admission of a patient to the center eliminates the transfer of critically injured patients from the Charleston County Emergency Room resulting in the conservation of life and resources. The Treatment Center also is a regional center for sexual assault victims. The number of patients treated for sexual assault has increased from 18 to 30 per month.

In another development, the Medical University Hospital established a decubitus ulcer team, comprised of physicians and nurses, to decrease the incidence of skin lesions associated with extensive hospitalization. Protocols have been established for prevention and treatment of this condition. The team was activated on January 4, 1980, and has treated a total of 48 patients to date.

A nurse has recently been assigned full time to the nutritional support team. The other members of the team include a full-time physician and pharmacist plus rotating dietitians and physical therapists. The nurse provides nursing evaluations and recom-

mentations which influence the approach to patient care. She assists in the teaching of nursing and medical personnel on the theoretical and practical aspects of nutritional support including tube feeding, hyperalimentation and intravenous therapy. The team monitors the effectiveness of the regimen and coordinates the discharge and planning of home care.

As technology in the field of medicine increases at a rapid rate, there is a growing need for registered nurses to staff and manage patient care. A critical shortage of nurses throughout the nation is being experienced at a period when the demand is high. In an effort to combat the shortage in South Carolina, an Ad Hoc Committee was established in April, 1980, by the Personnel Division of the South Carolina Budget and Control Board. The committee is composed of representatives of all state agencies who employ nurses. The charge accepted by the committee is to study the recruitment and retention of professional nurses. The areas under review include staffing, training, education, job satisfaction, benefits and compensation. The objective of the committee is to implement both short-range and long-range changes to overcome the shortage of nurses.

Design and Construction Progress

In the fall of 1979, state agencies were required to submit applications for Certificates of Need for new or changed institutional services and capital expenditures in excess of \$100,000. Since that time, the following projects have received Certificates of Need or have applications in progress:

- Renovation of the Medical Intensive Care Unit

- Renovation of the Second Floor of the BCD Building for Primary Care

- Replacement of Windows

- Replacement of Air Handling Equipment

- Elevator Tower

- Addition to Third and Fourth Floors to provide space for Burn Unit, Occupational Therapy and Vascular Laboratory

- Radiology Equipment

- Trauma Services

- Mobile Intensive Care Unit

- East Wing-Children's Hospital Addition

- Deletion of Psychiatric Beds

Financial Status

Financially, it was a very sound year for the Medical University Hospital. Cash collections from generated operating revenue totaled \$43,032,234, a 13.04 percent increase over the previous year, and the state appropriated \$15,277,678. Meanwhile, the hospital expended \$58.3 million including \$1,786,126 for medical equipment. Rates charged patients have remained stable over the past two years.

23,511	Nursery
148,000	Total
108.9	Average Census
69.7	Average Census—Nursery
7.1	Average Length-of-Stay
5.3	Average Length-of-Stay—Nursery
78.7	Patient Occupancy
20,328	Patient Admissions
97,007	CHS Visits
6,877	MHI Clinic
1,581	Cancer Clinic
24,770	Cardiac Clinic
7,702	Family Practice Unit
42,702	Eye Clinic
187,150	Private Diagnostic Clinic
7,449	Total
2,181	Surgical Procedures
77,902	Number of Deliveries
88,420	Clinical Pathology Procedures
91,342	Anatomical Pathology Procedures
19,870	Diagnostic Pathology Procedures
1,527	Therapeutic Pathology Procedures
42,512	Nuclear Medicine Procedures
387,302	Physical Therapy Procedures
388,807	Meals Served
1,828,000	Patient
1,870,872	Outpatient
2,810	Total
	Points of Laundry
	Number of Employees

MEDICAL UNIVERSITY HOSPITAL AND CLINICS

STATISTICAL SUMMARY

For the 12 Months Ending June 30, 1980

Beds and Bassinets Available	572
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Patient Days:

General Nursing Units	112,822
Special Care Units	10,606
Nursery	25,511

Total	148,939
Average Census	406.9
Average Census—Nursery	69.7
Average Length-of-Stay	7.4
Average Length-of-Stay—Nursery	5.3
Percent Occupancy	73.7
Patient Admissions	20,226

Clinic Visits:

MUH Clinic	97,097
Cancer Clinic	6,837
Cardiac Clinic	1,891
Family Practice Unit	24,770
Eye Clinic	7,792
Private Diagnostic Clinic	48,793

Total	187,180
Surgical Procedures	7,449
Number of Deliveries	3,161
Clinical Pathology Procedures	717,902
Anatomical Pathology Procedures	69,220
Diagnostic Radiology Procedures	91,323
Therapeutic Radiology Procedures	19,650
Nuclear Medicine Procedures	4,222
Physical Therapy Procedures	42,215

Meals Served:

Patient	387,202
Cafeteria	938,897
Total	1,326,099
Pounds of Laundry	1,370,572
Number of Employees	2,340

EXTENSION PROGRAMS

Medical University Extension Programs through its two divisions, South Carolina Area Health Education Center (AHEC) and the Statewide Family Practice Residency Program, continued to strengthen the regionalization of health resources throughout the state. Activities encompassed student rotations through various communities, an increase in medical residency training sites, widening continuing education opportunities, and extensive audiovisual and library support.

Medical Education:

A. Off-Campus Graduate Education

During the year, 229 residents were in training at various sites compared with only 69 residents in 1972. Specialties included family practice, internal medicine, pediatrics, emergency medicine, obstetrics-gynecology, surgery, orthopedics and ophthalmology. From prior study it is estimated that approximately 60 percent of these residents will remain to practice in South Carolina. Two new family practice centers, Greenwood and Florence, became operational in 1980. These residents along with residents in the other specialties will bring the total number for 1980-81 to 295

OFF-CAMPUS RESIDENTS IN TRAINING

JULY 1, 1980

<i>Columbia</i>		<i>Greenville</i>	
Internal Medicine	26	Family Practice	24
Family Practice	29	Internal Medicine	13
Pediatrics	11	Pediatrics	13
Emergency Medicine	10	OB/GYN	12
OB/GYN	9	Orthopedics	14
Surgery	16	Surgery	12
Orthopedics	8	Flexible Interns	8
Ophthalmology	3		
V. A. Hospital	4		
<i>Spartanburg</i>		<i>Greenwood</i>	
Family Practice	35	Family Practice	5
Surgery	8		
Medicine	1	<i>Anderson</i>	
Flexible Interns	6	Family Practice	26
<i>Florence</i>			
Family Practice	2		

B. Undergraduate Education

A total of 76 senior medical students elected to take off-campus rotation at AHEC sites, representing 49 percent of MUSC's 1980 graduating class. Eighty-six seniors have already enrolled in electives for 1981, representing approximately 51 percent of the projected 1981 MUSC graduating class. These students will, on the average, participate in 2.5 elective rotations within the AHEC system.

Undergraduate elective rotations in rural sites have increased from 27 student weeks in 1972 to 1,144 student weeks in 1980. Undergraduate community hospital-based elective rotations accounted for 770 student weeks. The remaining student weeks were accounted for through the Student Health Coalition and MECO, Medical Education and Community Orientation projects.

Dental Education:

Midlands AHEC and Richland Memorial Hospital continued to serve as the off-campus location for both graduate and undergraduate dental education. Activity was limited due to the absence of a senior dental class, the result of a changeover to the four-year curriculum at the College of Dental Medicine. During the coming year the entire senior class of the College will rotate through the clinic for a three-week off-campus experience.

Nursing Education:

Nursing education has been increasing in both importance and activity over the past several years. Currently, AHEC undergraduate clinical rotations are supplied for several technical colleges, Bob Jones University, USC Regional campuses, and other educational institutions. In addition, a Bachelor of Science-Registered Nurse program initiated by AHEC continues to operate at Winthrop College. AHEC funds have made clinical facilities of community hospitals available for the training of many LPNs, associate degree, diploma and baccalaureate degree nurses.

Pharmacy Education:

Two regional sites, Midlands and Spartanburg, have served the needs of pharmacy graduate and undergraduate students. Midlands AHEC currently has nine graduate and 10 undergraduate students, while Spartanburg has five undergraduate students. The pharmacy program, particularly in the area of Doctor of Pharmacy education, should experience growth in the coming year as a Statewide Pharmacy Coordinator has been hired and will be on board by fall.

Allied Health Education:

Substantial activity has been generated by the growth in numbers of allied health professionals within the state. Already graduate and undergraduate clinical courses are being supplied at Spartanburg, Midlands, Pee Dee and Upper Savannah. These rotations cover a wide variety of training areas: medical technology, radiologic technology, nuclear medicine technology, ultrasound, dietary, respiratory therapy, medical records, anesthesia and clinical pastoral services. Approximately 200 students are involved in these courses.

Continuing Education:

Continuing education for health professionals is being supplied by each of the seven regional sites. In an average month, 20,000 cumulative hours of continuing education will be recorded in the areas of medicine, dentistry, nursing, allied health, pharmacy and community/consumer education. This represents 3.3 hours per professional for some 6,000 health professionals throughout the state.

Minority Affairs:

Efforts of the minority affairs program have been instrumental in producing a 95 percent increase in black physicians between 1972 and 1980. The number of black residencies has increased from 4 in 1976 to 24 in 1980. This past year all black MUSC medical graduates, with the exception of one student with a Navy commitment, remained in South Carolina.

The Summer Health Careers program was once again a success with 31 undergraduate minority students participating. Statistics on this program reveal that this experience increases the likelihood of a student choosing a health career.

Educational Resources:

Developed and implemented during the year was a computer-based clearinghouse of health related workshops and seminars. The program was designed to alert health practitioners to educational opportunities, aid continuing education personnel in calendar planning, and eliminate unnecessary duplication. A clearinghouse print-out of reported activities is being mailed to appropriate South Carolina health education officers monthly. In addition to the monthly hard copy report, the Health Communications Network is broadcasting an abridged form of the clearinghouse with weekly updates.

An on-line computer-based list of mediated instructional materials, AVAIL, was finalized. With a phone-coupled computer ter-

minal, member users have access to the seven AHEC media centers, the MUSC Learning Center, and many statewide agencies. *The South Carolina AHEC Directory of Educational Resources* will be produced using the data in this system. The directory will list human, funding, library and audiovisual resources available.

SNAP, the Statewide Needs Assessment Program, is a curriculum development tool utilized by continuing education program planners. This year SNAP surveys were initiated in nursing and allied health.

OFFICE OF AFFIRMATIVE ACTION-MINORITY AFFAIRS

Considerable attention was given to preparation for an on-site visit by the Office of Federal Contracts Compliance Program of the Department of Labor. As final results of this visit are being awaited, it should be pointed out that all records of university personnel and all plans for protected classes, e.g., handicapped Vietnam veterans, blacks and women, have been updated; and all statements of contract, religion and commitment have been incorporated in the university policy.

An analysis of current work force reveals that the work mix is acceptable and moving along the levels set by the Department of Labor; however, with the lack of available candidates for higher level positions, the employment success rate is obviously affected. Nevertheless, employment practices and current work force are consistent with the Charleston area makeup as it relates to the employment pool.

Monitoring procedures of employment practices have been strengthened and will produce the affirmative action audit trail necessary to keep track of the personnel operation, both classified and unclassified. The faculty recruitment committee is working diligently to increase the participation of minority faculty on the university's staff.

Continued attention is being directed to revision of the stated Affirmative Action Plan and maintaining an excellent advisory committee and executive staff. More active involvement of department and division heads in the academic sector will be encouraged and monitored. Implementation of the Plan applies to all levels and phases of classified and unclassified (faculty) personnel administration covering recruitment, leave practice, termination, classification, compensation, benefits and training. It is made under the provisions of the Civil Rights Act of 1964, Title VII of the Equal

Employment Opportunity Act of 1972, Title IX of the Education Amendments of 1972, the Rehabilitation Act of 1973, Executive Orders 11246 and 11375, Revised Order 4 of the Department of Labor, the South Carolina Human Affairs Law of 1972, the Format Memorandum issued by the U. S. Department of Health and Human Services in August, 1975, and Section 402 of Public Law 92-540.

To implement the statewide effort to upgrade health delivery to minorities in South Carolina by minority practitioners, this office has developed and is carrying out a variety of recruitment, counseling, placement and retention strategies. Throughout the year, it has developed and expanded activities to reach potential health professionals in high school and college, and those already in the work force.

A. *High school interaction* was maximized.

1. Three minority student organizations at the Medical University (Minority Student Union, Student National Medical Association and Student National Dental Association) made regular visitations to area high schools to: (a) inform students of the vast possibilities of health careers; (b) share specific information on relevant health issues: contraception, drugs, nutrition; and (c) serve as role models for minority youths.
2. The staff attended many health career fairs throughout the state offering basic information on entrance requirements and general preparatory measures to assure access to health career education. Also, a televised workshop at Area Health Education Center (AHEC) regional sites was held (for the second consecutive year) for high school counselors entitled, "Health Careers and the Minority Student." Counselors were alerted to the predicament that faces many minority youth who are stereotyped into non-academic tracks and/or receive little encouragement by their school systems to pursue scientific and mathematically oriented curricula. Suggestions were offered, as well, for types of activities that could be undertaken to encourage students in these directions.

B. *Collegiate involvement* continued through the Pre-Health Council (a body of off-campus advisors to the Office of Minority Affairs consisting of representatives from the five predominantly black accredited institutions in the state). These representatives help to guide students at their respective campuses toward programs either at the Medical University of South Carolina or

the University of South Carolina. The Library Consortium developed by the Council has made steady progress toward providing viable library backup to students desiring health careers, particularly those involved in the Summer Health Careers Program or Biometry Internship Program.

The Summer Health Careers Program completed its seventh year, exposing minority students to the rigors of health professional training. Thirty-one students participated in the eight-week program requiring Biochemistry, Gross Anatomy, Medical Terminology, and Oral and Written Scientific Communication course competency. Additional seminars were held in Genetics and MCAT/DAT Preparation. Each student was again assigned to a MUSC faculty member (in all colleges of the University) affording them research experiences throughout the summer. Eleven South Carolina colleges and six out-of-state colleges were represented. Specific additions to this year's program included a series of addresses made by both aspiring and practicing minority health professionals in an array of disciplines: nutrition, clinical psychology, radiology, nurse midwifery, and medical technology, among others. The importance of this effort cannot be overstated, as the entire process of role modeling continues to be a foremost component in encouraging minority participation in the health sciences. Site visits continued to be made this year, giving students exposure to the many support aspects of total health care, i.e., the Sickle Cell Anemia Program, Mental Retardation Center, urban and rural comprehensive Health Care Corporations.

Five students participated in the Biometry Internship Program geared towards encouraging mathematically oriented students into graduate studies curricula. Two local high school students participated in an adjunct Biometry Workshop, thereby allowing even earlier exposure to this discipline.

The Visiting Professors Program provided continuous communication between the Pre-Health Council schools and faculty at the Medical University. Particular attention was paid to Morris College in Sumter, as the newest council member. Lectures by faculty, staff and students helped in this exchange effort.

C. *Professional liaison* with minority health practitioners and the statewide black community was increased. AHEC and the College of Medicine jointly sponsored a session at the Palmetto Medical, Dental and Pharmaceutical Association's annual meet-

ing in Columbia. Initial moves were made to develop continuing education activities through AHEC with this organization which represents the overwhelming majority of black South Carolina doctors, dentists and pharmacists. An invitation to hold the Association's annual board meeting at the Medical University was accepted.

At the request of the Governor's Division of Rural Development, the Office of Minority Affairs has joined in a multi-agency effort to coordinate a health education project in an impoverished area of Charleston County, Peter's Field.

D. *In the way of minority graduates and admissions*, six black MD's were graduated with five doing residencies in the state at AHEC sites. Four black pharmacy students graduated, as well as two bachelor degree nurses, and upper division allied health sciences students. There was no regular graduation in dentistry because of that college's return this year to the four-year curriculum.

Admissions for September, 1980, reflect an even rate of minority acceptances: ten into medicine, four into nursing, two into dental medicine and thirty into allied health.

DIVISION OF CONTINUING EDUCATION

Health Communications Network

Increasing involvement in live grand rounds programming, utilizing the Health Communications Network's (HCN) two-way interactive video capability and Network-wide telephone talkback system, was a highlight of the year. OB/GYN Grand Rounds, the Network's first grand rounds series, was broadcast bimonthly between Charleston and Spartanburg and attracted over 1,600 viewers. OB/GYN served as a prototype for other grand rounds series, including Family Medicine and Psychiatry. Also developed were Nursing Grand Rounds, produced and sponsored by the University of South Carolina (USC) School of Nursing, and Recent Advances in Radiological Imaging. Continuation of this entire group of live programs is anticipated, as is the addition of several new grand rounds series.

The Network, in cooperation with S. C. Educational Television, links 31 hospitals, 14 State Health Department sites, and the USC School of Medicine to the Medical University via closed circuit

television. In June, the Network sponsored an accredited workshop in Charleston for HCN members, focusing on needs assessment. Five additional mini-workshops, a studio tour, and two group discussion sessions offered the representatives an opportunity to interact with Network staff and content specialists. The positive evaluations and response to the workshop have encouraged the staff to plan annual workshops for HCN representatives.

HCN's Infection Control Week was another highlight of the year, featuring twenty hours of Infection Control programming targeted for all hospital personnel, from kitchen workers to administrators. Concluding this special week was a live "forum" during which practitioners were given an opportunity to address questions to a panel of experts. Infection Control Week was extremely well received and attended and resulted in an increased awareness of infection control throughout the state. Medical Terminology, a comprehensive learning packet similar to the Infection Control Series, is near completion. Appropriate supplementary printed materials for the instructor and student have been developed for both series.

The Network's increased emphasis on accredited programming and utilization of sound instructional design gained momentum during the year. Five comprehensive instructional modules in the *Nursing Care in Emergency Situations Series*, consisting of Infection, Obstetrics, Pediatrics, Psychiatric Emergencies, and Metabolic modules, were approved for continuing education units (CEU's), as was the entire Nursing Grand Rounds Series. The popular *Legal Aspects of Nursing in South Carolina Series*, featuring live telephone talkback discussion segments, was also offered for credit.

Various innovative scheduling approaches were also taken including thematic programming (i.e., a concentrated series of broadcasts designed to give a comprehensive overview of a particular health topic). Also, liaison was established with the Professional Standards Review Organization (PSRO) in South Carolina for the purpose of measuring the effectiveness of specific programs through a change in the types of reports that are received regarding diagnostic and treatment modalities. Additionally, discussions took place with the South Carolina Hospital Association to determine relevant joint programming efforts.

Another major accomplishment has been the total revision and updating of the HCN videotape library in terms of technical quality and current relevance of content. The HCN Videocassette Cata-

log format is being completely revised in accordance with widely-accepted cataloging procedures. Also, as a special service to the health practitioners in the state, procedures for offering HCN videotaped productions on half-inch videotape format are being established.

In response to interest in HCN by hospitals in the state without technical access to closed circuit broadcasts, a special HCN subscription policy is being developed. This yearly HCN subscription will consist of monthly mailouts and a Non-Member HCN Videocassette Catalog. Subscribers may then rent or purchase HCN productions based on the modest in-state fee structure and/or make arrangements to view, at HCN member institutions, those closed circuit broadcasts unavailable on videocassette.

In consideration of the traditionally unserved night shift nurse, in terms of continuing education offerings, thought is being given to open or closed circuit broadcast of programs between 12 and 5 A.M. A study is also under way to determine the feasibility of offering courses on the Network toward a baccalaureate degree in Nursing.

On the national level, the Health Communications Network has played an integral part in the development of the newly formed National Association of Hospital TV Networks. Also, two recent HCN productions have been submitted to national media competitions: *The Infection Control Series* and *Introduction to Medical Terminology* to the Health Sciences Communication Association (HESCA); and, *Allen's Strange and Lonely World* to the International Rehabilitation Film Festival. Several articles appearing in national trade magazines describe the Network as a pioneer in the use of communication satellites for the cost-effective exchange of medical information among 18 similar statewide medical networks.

Conference Section

Mini-residencies, whereby the practicing physician away from the medical center is brought back into the teaching hospital setting for varying periods of time according to individual needs to learn new techniques, became a reality during this year. This Continuing Education program had a slow beginning because of the detailed scheduling necessary to fit individual participant needs. However, several mini-residency offerings were enthusiastically received by the physicians of South Carolina during the spring and early summer of this year, and an expanded mini-residency program is planned for this coming year (1980-81).

The Conference Section and the University Office of Alumni Affairs initiated a cooperative effort to provide offerings for MUSC alumni attending the Alumni Spring Weekend in March. It is planned to extend this cooperative association into a true University-wide Alumni Continuing Education Day in the spring of 1981.

A computerized record keeping system for credits earned by individual participants is maintained by the Division in cooperation with the Medical University Registrar's Office. In addition, each member of the faculty is supplied with a certified letter attesting to the credits.

Altogether, 113 programs were presented with a total attendance of over 11,000.

Following evaluation by the Liaison Committee on Continuing Medical Education (LCCME) on June 2, 1980, the Division of Continuing Education was re-accredited for six years to provide LCCME credit for Continuing Medical Education activities.

Studio Section

The Medical University has had two separately administered television production units to support its educational program needs. On May 1, 1980, these two units merged to form one section under the administrative direction of the Dean of Continuing Education. The Division's television staff doubled as a result of this action.

At present, the two facilities remain physically separated; however, planning has begun for a physical merger, the designated area for this facility being located on the fourth floor of the Summerall Center.

Present television facilities are approaching obsolete status with respect to equipment age and "state of the art" systems development. To reverse this trend, plans are under way for a format conversion from two-inch quadraplex to one-inch broadcast tape.

In addition, the Division's Five Year Budget Projection lists several proposed capital purchases designed to insure effectiveness as a television production facility and enhance the unit's ability to meet the future graduate/undergraduate and continuing education needs of the Medical University and the Health Communications Network. Finally, the proposed plans will enable the unit to maintain a broadcast compatibility with South Carolina ETV and commercial broadcasters which will become even more important in serving public relations and public health education needs.

SUMMARY OF ACTIVITIES

July 1, 1979 through June 30, 1980

Workshops and Seminars Sponsored or Co-Sponsored . .	113
Programs Produced for Open and Closed Circuit Television	31
Videotapes Produced (Studio Section)	50
Other Productions (Studio Section)	25
Grand Rounds Broadcast	24
Telecasting Open Circuit Half-Hour Programs	52
Broadcasting FM Radio Half-Hour Programs	52
Telecasting Closed Circuit	1,014 hours
Videocassettes Requested	1,448
Audiocassettes Requested	144

Number Attending, Listening or Viewing

	<i>Total</i>	<i>Seminars</i>	<i>Media</i>
Physicians	12,918	67%	33%
Nurses—RN's, LPN's	5,571	24%	76%
Allied Health	1,378	46%	54%
Other	1,236	33%	67%
Open Circuit Viewing (Adults Estimated)	220,000	0%	100%
FM Radio (Adults Estimated)	46,000	0%	100%
Closed Circuit Viewing	10,066	0%	100%
Videocassettes	6,292	0%	100%
Audiocassettes (Program Taping, Dubbing)	144	100%	0%
Total Number Reached	303,605		

MUSC Credit Approved Departmental Activities

<i>Program</i>	<i>Attendance</i>
Family Medicine Teaching Conference and Grand Rounds	560
Medicine Grand Rounds	1,007
Neurology Conference	147
Laboratory Medicine Conference	206
Round Table Slide Conference	81
Clinical Pathological Conference	64
Psychiatry and Behavioral Sciences Departmental Conference	665
Department of Psychiatry Child Psychiatry Seminar	136
VA Hospital Mental Hygiene Clinic Clinical Conference .	39
Department of Radiology Conference	699
Teaching Conference in Neuroradiology	302
Urology Grand Rounds	315
Pediatric Grand Rounds	708
Department of Surgery Grand Rounds	314
Cancer Conference	276
Department of Psychiatry and Behavioral Sciences Weekly Psychosomatic Case Conference	246
Surgical Pathology Conference	3
Orthopedic Pathology Conference	7
Renal Pathology Conference	40
Graduate Medical Education in Pathology	132
Gastrointestinal Pathology Conference	28
Neuropathology Conference	200
Roper Pediatric Staff Conference	334
TOTAL	6,509

Continuing Education Courses

<i>Date</i>	<i>Programs</i>	<i>Attendance</i>
July 12-13	Applied Nutritional Counseling by Allied Health Practitioners	12
July 19-27	Advances in Obstetrics & Gynecology	6
Aug. 1-4	1979 HEW Regional Obstetrics-Pediatrics	106
Aug. 3	Diagnostic Ultrasound Course	20
Aug. 6	Shearing Lens Course	16
Aug. 9-11	International Symposium on Male Fertility/Sterility ...	91
Aug. 10-11	S. C. Chapter of the A.A.P. & S. C. Pediatric Society ..	54
Aug. 16-19	South Atlantic Cardiovascular Society Annual Meeting ..	126
Aug. 22	"A Closer Look" at Decubiti Prevention & Treatment ..	40
Sept. 6-9	25th Tri-State Consecutive Case Conference	26
Sept. 12-14	National Board Review Seminar for Physician Extenders	92
Sept. 13-		
Oct. 11	Nursing in a Disaster	76
Sept. 19	Indications for Cardiac Pacing	16
Sept. 19-21	Workshop on Biofeedback in Treatment of Neuromuscular Disorder	22
Sept. 23-26	Adolescent Obstetrics & Gynecology	52
Sept. 24-27	9th Annual Dosimetry Conference	9
Sept. 27	Asbestos Seminar	42
Sept. 28	Hypertension Workshop for Nurse Educators	60
Oct. 1-3	Quality Assurance in Radiology Workshop	19
Oct. 1-5	Mini-Residency in Radiology	2
Oct. 2, 4, 9, 11, 16, 18, 23, 25		
Oct. 3-31	Update Gynecological Nursing	13
Oct. 3-31	Legal Aspects of Nursing in South Carolina	21
Oct. 4-5	The Coordination of Health Care Systems, Issues, Policies & Strategies	47
Oct. 8	Southern Psychiatric Assn. Educational Session	163
Oct. 8-9	Clinical Management of Diabetes & Endocrine Disorders ..	67
Oct. 8-12	Mini-Residency in Radiology	2
Oct. 9-10	1979 Fall Meeting, S. C. Chapter of American Cardiology Technologist Assn.	37
Oct. 9-10	Difficult Problems in Pediatric Urology—Pearl & Pitfalls ..	78
Oct. 9-10	S. C. Society of Histology Technicians	17
Oct. 12	Student Cancer Day—R.N.	76
Oct. 12	Student Cancer Day—M.D.	26
Oct. 12	Student Cancer Day—Students	151
Oct. 13	Disseminated Intravascular Coagulation & Other Bleeding Disorders—A Symposium for Nurses	17
Oct. 16	Unifying Practice, Education and Research	111
Oct. 16-18	3rd Annual Consecutive Case Conference	33
Oct. 17-18	Basic Arrhythmias and the Nurse	41
Oct. 18-20	1st Annual Meeting Southeastern Assn. for Clinical Microbiology	230

<i>Date</i>	<i>Programs</i>	<i>Attendance</i>
Oct. 19	Advantages of Transfusion	18
Oct. 20	Management of Adult Diabetes	13
Oct. 22-26	Mini-Residency in Radiology	2
Oct. 24-27	Hypertension Control in Rural Communities	67
Oct. 25-28	4th Annual Southeastern Regional Conference on Sexual- ity in the Human Equation	87
Oct. 26	What's New in Nursing—Identifying High Risk Mother & Infant	48
Oct. 27	High Voltage Transmission Electron Microscopy	40
Oct. 29-		
Nov. 2	Mini-Residency in Radiology	2
Oct. 31	Rheumatoid Arthritis & Variants—New Insights	43
Nov. 11	Sexual Assault: A Perspective for the 80's	5
Jan. 11-18	Advances in OB/GYN	14
Jan. 18-24	Advances in OB/GYN	18
Jan. 19-29	Office Emergencies for Podiatrist	23
Jan. 23-25	A Mini-Residency in Neurology for Non-Neurologists ..	6
Jan. 23-24	Update: Care of Patients with Respiratory Problems ..	64
Jan. 25	Gynecological & Breast Cancer	77
Jan. 28-		
Feb. 1	Mini-Residency in Radiology	2
Feb. 1-8	Advances in OB/GYN	47
Feb. 4-5	Workshop in Testing	13
Feb. 8-11	Psycho-Therapeutic Treatment of Sexual Dysfunction ..	7
Feb. 9-14	Advances in OB/GYN	11
Feb. 15-22	Advances in OB/GYN	16
Feb. 27-29	Mini-Residency in Neurology for Non-Neurologists	6
Feb. 27-29	Substance Abuse Seminar	25
Feb. 29	What's New in Nursing—Critical Care Potpourri	60
Mar. 6	Topics in Primary Care Medicine	84
Mar. 6-9	The Thegos Society—1980	24
Mar. 8-9	Forensic Pathology Seminar	79
Mar. 12-13	Perspectives on Adolescent Health Care	64
Mar. 15	Cytology Seminar No. 16	85
Mar. 17-20	Mini-Residency in Radiology	1
Mar. 17	Reality Shock & Biculturalism	197
Mar. 20-22	Southern Society of Anesthesiologists	381
Mar. 21-22	Southeast Regional Conference of Nursing Diagnosis in Practice, Education & Research	49
Mar. 24-29	Continuing Medical Education Seminar in OB/GYN Group I & II	52
Mar. 26-30	Continuing Medical Education Seminar in OB/GYN Group III & IV	42
Mar. 27-	Combined Michigan-South Carolina Family Practice Re-	
Apr. 2	resher Course	76
Mar. 31	Multidisciplinary Approach to Epilepsy for Nurses	11
Mar. 31-		
Apr. 4	Mini-Residency in Radiology	2

<i>Date</i>	<i>Programs</i>	<i>Attendance</i>
Apr. 4	Annual Meeting Southern Society of Physical Medicine & Rehabilitation	14
Apr. 6	Writing for Publication	45
Apr. 11-12	Recent Advances in Hematology & Hemostasis	37
Apr. 16-20	Postgraduate Course in Surgery	92
Apr. 23-26	Mini-Residency in Neurology	4
Apr. 25-26	Is Everyone Out There Learning—The Orton Society .	143
Apr. 25-26	S. C. Society of Histology Technicians Spring Seminar	35
Apr. 28-30	Mini-Residency in Nephrology for Practicing Physicians	4
May 9-10	14th Annual Ophthalmology Conference	78
May 15-17	Ocular Motility Symposium for Ophthalmic Medical Assistants	18
May 26-27	Practical Urology for the Primary Care Physician	25
May 29-31	Clinical Allergy for the Practicing Physician	75
June 11-13	First Annual Neuro-Nursing Symposium	50
June 19-20	Perimetry Symposium for Ophthalmic Medical Assistants	30
TOTAL		4,528

ADMINISTRATIVE AND FISCAL AFFAIRS

The Medical University's total operating budget for 1970-80 amounted to approximately \$126,800,000.00 of which State-appropriated funds comprised 52 percent, Federal funds 9.3 percent and other funds 38.7 percent. Expenditures for employee salaries and benefits amounted to \$79.2 million and other expenditures came to approximately \$47.6 million.

A number of significant improvements occurred during the year in the area of fiscal management. Many of the management information reports were redesigned and a number of additional reports were developed. Sponsored Programs Accounting produced a new Federal activity reporting system which aligns the University with Office of Management and Budget guidelines. The institutional indirect cost rate was renegotiated with the Federal Government, resulting in a 3 percent increase over last year's rate. Efficient handling of accounts payable allowed the University to take advantage of 96 percent of the available discounts, which produced a savings of \$101,131. Computer programs for position budgeting and annual budget request preparation were rewritten to provide more useful information. These revisions made it possible for preliminary work on the 1980-81 budget and the five-year budget plan to be generated by computer, thus reducing much of the manual compilation of data. The Office of Project Administration was established within the Controller's Office to maintain University files on permanent improvement projects, make necessary reports and accounting entries on such projects, and provide current data on debt service accounts and bonding capacities.

The most noteworthy development for the Computer Center was the granting of approval by the State Budget and Control Board to replace the existing IBM 370/148 computer with the IBM 3033N computer, which will provide a computational capability of ten times the current one. The new system, to be installed in 1980-81, will allow the development of many badly needed services for the academic, hospital and clinic areas that have been previously forestalled due to overloading of the 370/148 system.

The Medical University's parking system included 2,797 spaces in 1979-80: 2,134 reserved spaces, 61 metered public spaces, 24 free spaces for the handicapped, 310 free public spaces on Hagood Avenue served by shuttle bus, 243 public pay spaces in the Parking Garage and 25 special use spaces. In addition to the Office of Parking Management's continuing efforts to meet the evergrowing

need for parking facilities, during the year special emphasis was placed on the development of car-pooling and van-pooling as a means to reduce the demand for new parking while, at the same time, contributing to the effort to reduce energy consumption. Four van pools were in operation in 1979-80, with a fifth van to be implemented early in 1980-81.

During the fiscal year the Purchasing Department, Property Control, General Stores and Central Receiving areas of the University were reorganized into the Division of Procurement and Property Management under the leadership of a new director appointed in July. The Division has three functional areas: the Purchasing Office, the Property Office, and General Stores/Central Receiving. The Purchasing section was reorganized utilizing the commodity team concept. At the end of the year the Purchasing section was fully staffed with four commodity teams (buyer and typist), a purchasing manager, and document clerks. Approximately 50,000 purchase orders are issued annually, and the average "processing" time has been lowered from 10-14 days to the present 2-3 days. A users' manual was written and disseminated to the University community which provided detailed information on policies, procedures and practices of the Procurement and Property Management Division. Improvement of the property management system for the Medical University held high priority in the Division's activities for the year. Beginning in July, the Property Office began performing physical inventories of the major movable equipment of all areas of the University. By the end of the fiscal year, all areas except the Hospital and Clinical Science Building had been inventoried, with a projected completion date of December, 1980, for the program, after which inventory records will be purged of inaccurate or insupportable data. A commercial appraisal firm was engaged to conduct a periodic accounting/appraisal update on the University's fixed asset records; the firm's report will be received during 1980-81.

It was also a very active year for the Personnel Services Department which interviewed 4,102 persons seeking employment with the University, of whom 1,373 were hired. To provide up-to-date information on job openings to employees and the public, the Dial-A-Job system was implemented in October. By way of telephone answering equipment, information is now available twenty-four hours a day on current vacancies. Over 29,000 inquiries were recorded for Dial-A-Job during the fiscal year. The University

joined other area employers in the Title IV Summer Youth Employment Program by providing jobs for twenty-nine economically disadvantaged, unemployed youths; the cost of the program was funded through the Comprehensive Employment Training Act. The University also took part in the Work Education Council's program to place educators in work environments where they could gain insights to share with students and, hopefully, bridge gaps existing between the educational and work environments. Through its Evening Program, Personnel Services continued to offer educational courses to University employees in the areas of basic education, supervisory development, personal growth and development, and special skills. Forty-three seminars/workshops were presented during the year to meet training needs. Service awards were given to 311 faculty and staff members at special ceremonies in January.

As a part of its on-going activities, the Internal Auditing Office in 1979-80 verified and audited all petty cash, check-cashing and change funds, monthly journal entries and patient account receivable records, payroll and accounts payable disbursements, general stores inventory issues and receipts and many other transactions of the University system. Internal Auditing also assisted the various external audit groups as required.

The Business Operations Division conducted a comprehensive review of the insurance on University buildings and contents for re-evaluation of coverage requirements. A new procedure was instituted during the year whereby departmental purchase requisitions for books are now processed by the Bookstore rather than the Purchasing Section, resulting in large savings to the MUSC departments through discount purchasing capabilities. A campus-wide copying study was accomplished during the year to ascertain whether savings might be accomplished through the relocation or exchange of duplicating equipment. An average of 221 students were housed in the Alumni Memorial House during the fall and spring sessions. The summer 1979 occupancy was 109 residents.

A number of major construction projects were underway during the year. As part of a continuing effort to modernize the Medical University Hospital, work was completed on electrical switching station improvements, renovation of the neonatal nursery, paving of the crawl space under the Hospital building, completion of new inpatient/outpatient admissions facilities, installation of a sump pump under the Hospital, and alterations to the Radiology dark room, the first-floor minor treatment room, and the X-ray treat-

ment room. The construction of service bridges on the rear side of the Hospital progressed to approximately 53 percent completion as of June, 1980. Alterations to the third floor of Quadrangle Buildings E and F, a phase of the Quadrangle Renovation Project, were begun in May, 1979, those for Building F being completed in April, 1980.

Projects which are still in the design/planning phase include the improvement of access to University buildings for handicapped persons, the construction of a general stores and central receiving facility, and construction of a 10,000-square-foot addition to the roof of the Basic Sciences Building for laboratory animal facilities. The Medical University received a grant from the U. S. Office of Energy in the amount of \$43,853 for the construction of a deep well which will pre-heat water supplied to the Hospital, Clinical Science, Basic Science and Eye Institute Buildings. This system, when operational, is expected to effect an annual energy savings of \$11,500 to the University.

Campus security was improved during the year by the installation of an additional closed-circuit television camera on the Mill Street side of the Medical University Hospital. The Department of Public Safety centralized the campus alarm detection systems and increased the number of alarms located throughout University buildings. Eight public safety officers graduated from the South Carolina Justice Academy during the reporting period; 95 percent of the University's public safety officers have now received certification.

ACADEMIC COMPUTER ACTIVITIES

The University Computer Committee worked with all areas of the Medical University to strengthen data and word processing capabilities. This effort was carried out through regular, as well as special, meetings of not only the full committee, but also smaller sub-committees established to address more specific issues. One such standing sub-committee continually reviews all requests for electronic word and data processing hardware and software, while another sub-committee is working to better define long-range needs in the word processing area.

The full committee was involved in proposals to acquire new computers. The acquisition by the Biometry Department of a new PRIME computer, model 550, gave much needed additional computing power to the faculty and students in that area. The com-

mittee met with representatives of the Biometry Department to develop various policies and procedures for use of this machine for a wider range of academic computing by persons throughout the University. The College of Dental Medicine also acquired a new PRIME computer, model 750, to meet expanded needs for patient care and education. This new machine also will be used to meet some of the computing needs of the Learning Resource Center as well as of various consortium institutions throughout the State. The College of Pharmacy obtained a Digital Equipment Company (DEC) computer, model PDP-15, to augment the one in operation. These machines will be housed in well-designed space which has been specifically renovated for this purpose in the College. The most significant acquisition was a new computer for the Main University Computer Center (MUCC). The entire process leading to this latter acquisition took much time and planning but the new machine, an International Business Machines computer, model 3033N, should give the University a significant enhancement in computing power to meet needs in all areas: business, academic, and patient care. This latter machine is to be installed during the fall of 1980. The committee is still working on plans for cabling from the Computer Center to other areas of the campus for the most effective utilization of the new machine.

Microcomputers continue to find increasing use throughout the University. In the educational area these small, stand-alone devices are very useful in providing computer-assisted instruction. In the administrative areas, some offices and research groups have found them useful for word processing as well as data processing.

Word processing is an area of great interest at present. Machines of various sizes, from small microcomputers to large main-frame computers, are now being used at the University for this purpose. In some cases, the capabilities of the word processing equipment have not met subsequent data processing needs, whereas in other cases, data processing equipment does not have sophisticated enough word processing capabilities. The University Computer Committee is actively studying this situation so that a plan for integration of word/data processing into a network can be developed.

UNIVERSITY RELATIONS

Development, Alumni and Public Relations

The Development and Alumni Relations office continued programs designed to attain broad base support among alumni and friends of the Medical University. An increase in the number of contributors donating \$1,000 or more helped the Health Sciences Foundation realize in excess of \$640,000 in receipts during the year. The Sims-Hester Chair in Obstetrics and Gynecology reached 80 percent of its \$750,000 goal and several new privately funded lectureships were well underway.

The number of alumni participating in private support programs increased as did alumni paying dues. A class agent program for alumni was designed and is being implemented in 1980. The *Auctus Alumni Bulletin* continued to be well received and increased alumni interest was evident in the number of alumni participating in activities such as class reunions and the Alumni Spring Weekend.

The computer-based records system, listing gifts as well as alumni biographical information, saw extensive use and provided needed word processing support. More complete alumni biographical information will be obtained by means of a survey in 1981.

Renovation of the Wickliffe House, the historic faculty-alumni house donated to the Health Sciences Foundation, was completed and dedication of the facility is planned for the fall of 1980.

A reorganization of the Public Relations Department began with the appointment of a Director experienced in organizing and managing health and medicine public affairs. Utilizing existing staff positions, recruitment was underway at year end for a Manager of Public Information and three professional writers.

On-going activities in the Public Relations Department included placement of 1,178 stories in state and regional newspapers; writing of 197 news releases and scheduling of 20 news conferences; and placement of more than 200 television news reports, public affairs programs and public service spots. Hosting 1,048 visitors in 56 campus tours and a revamping of the mailing system by means of computerized address lists were two cost-effective methods of reaching MUSC publics. Two internal publications—"Chart" and "Newscope"—were redesigned to improve readability. The Medical University's consumer health messages, which are broadcast by television stations across the state, won first prize in the audio-visual category of the Carolinas Hospital Public Relations Society annual awards program.

Publications—Medical University Press

An important adjunct to printing operations has been the quick copy center used primarily for the production of teaching guides and manuals. At one especially busy period, that of December, a record number of impressions—over 800,000—was made by the photocopier. Altogether, more than 400 photocopy runs of substantial size were made during the year, the average number of impressions per month running over 300,000.

Combined with this production were over 5,000 offset press runs, the majority of these runs producing the forms essential to operation of hospital and clinics.

To keep pace with University requirements, an aging press was replaced; an envelope feeder installed to speed the printing of envelopes; and a label machine purchased for centralized addressing of bulk mailings and intra-institutional communications.

Printing services of the University were centralized through the merger of the Division of Continuing Education print shop and that of Medical University Press. One of the benefits accruing was a substantial increase in typesetting capability.

A sampling of this year's publications follows:

- Directory of Clinical Services
- Arthritis Booklet
- Campus Telephone Directory
- Alcohol Learning Manual
- General Faculty Rules and Regulations
- Employee Development Training Program
- University Employee Handbook
- General Pathology Course Guide
- Pediatric Core Manual
- General Stores Catalogue
- Behavioral Sciences Syllabus, Volumes I and II
- Medical Terminology
- Area Health Education Center Annual Report
- Biometry Core Manual and Student Handbook
- Purchasing and Property Management Guide
- Heart Catheterization Booklet
- Film Series Calendar
- University Student Directory
- Routine Blood Stain Manual
- Oral Diagnosis

Dental Laboratory Diagnosis
 Family Medicine Residency Handbook
 Physician's Guide to Diets
 Diet Manual
 General Clinical Research Center Manual
 Electrotherapy Syllabus
 Urinalysis Procedure Manual
 Hematology Lecture Syllabus
 Neuroanatomy Student Guide
 Histology and Embryology Syllabus
 Surgery Annual Report
 Medical Pharmacology Workbook
 Pharmacology Syllabus 321 and 443-621
 Preclinical Crown and Bridge Manual
 Removable Partial Prosthodontics Course Outline
 Research Newsletter (monthly)
 Commencement Programs and Certificates
 Pharmacy Code
 Custodial Handbook
 House Staff Manual and Directory
 Reference Values and Specimen Collection
 Essentials of Laboratory Medicine
 Hemotherapy Manual
 Introduction to Nuclear Medicine
 Annotated List of Indexes and Abstracts
 Notes for Medical and Graduate Students
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CHARLESTON HIGHER EDUCATION CONSORTIUM

Baptist College

The Citadel

College of Charleston

Medical University of S. C.

S. C. Marine Resources Division

Trident Technical College

In answer to a request of the Charleston Higher Education Consortium's Executive Committee to clarify the legal status of the Consortium, the State Attorney General's office ruled this Spring that the Consortium constitutes a public service of the Medical University. This ruling validates and ensures the continuation of the Consortium's funding mechanisms and procedures—i.e., the provision of member institution contributions, the channeling of State appropriations through the Medical University's budget, and the use of member institutions as the recipients of grants on behalf of the Consortium.

Graduate Programs and Research

1. *Student enrollment.* The 1979-80 student enrollments for the three Consortium Graduate programs were as follows: Special Education, 374; Master in Public Administration, 58; Marine Biology, 24.

2. *Reorganization of the Marine Biology Program.* Through this past year, all of the faculty and most of the resources for the Marine Biology graduate program were provided by the College of Charleston. Under a major reorganization effort completed this past Spring, the program was structured as a true Consortium effort. Dr. Paul Allen Sandifer, Assistant Director of the Marine Resources Research Institute, was appointed Director of the Program and a forty-four member faculty was appointed which includes members of the Marine Resources Research Institute and faculty from The Citadel, and Medical University of South Carolina as well as from the College of Charleston. Over this coming year, the faculty will plan how best to utilize the program's expanded resource base and will develop a broader curriculum (e.g., with options in such areas as applied fisheries management, aquaculture, and marine biomedicine). The Medical University's recent appointment of a nationally prominent scientist, Dr. Thomas C. Cheng, as Director of its Marine Biomedical Research Program promises even further to enhance the training and research potential of the Marine Biology program.

3. *Consortium Graduate Catalogue*. Under the chairmanship of Dr. Benjamin Lawson, Dean of the Medical University's College of Allied Health Sciences, the Consortium Graduate Deans Committee has agreed to compile and publish a unified catalogue that will describe all of the graduate-level programs offered within the Consortium.

4. *Research*. The Consortium has seen numerous instances of cooperative research efforts involving individual faculty members from different institutions. The most prominent instance has been the planning of a major project in catastrophe theory by researchers from the Medical University, The Citadel and the College of Charleston. It is expected this project will receive three-year funding from the National Science Foundation's Experimental Program to Stimulate Competitive Research.

5. *Program Planning in Health Services Research and Evaluation*. Under the impetus of an initial planning grant from the Medical University's Health Sciences Foundation, an *ad hoc* committee has been meeting over this past year to examine the need for improving the training capacity in health services research and program evaluation of six graduate-level programs—the Master's programs in Nursing, Allied Health Sciences, Special Education, Urban Public Administration, and Business Administration, the Master's and Ph.D. programs in Biometry, and the Family Medicine residency program. This group is planning to develop a proposal for a Public Health Service grant that would support the interinstitutional development of the training capacity in these areas.

Cross Registration Policies

The Academic Affairs and Executive Committees have revised the cross-registration policies so that full-time students may now register for cost-recovery courses on a tuition-free basis. This revision is expected to encourage increased utilization of the cross-registration option.

Educational Opportunity Center Program

Under a grant from the U. S. Department of Education, the Consortium's Educational Opportunity Center (EOC) program was established this past Fall. The purpose of this program, which is being administered through Trident Technical College, is to offer pre-enrollment and post-enrollment counseling and related assistance to disadvantaged Tri-county residents who wish to pursue

postsecondary schooling. The program is under the direction of Dr. Elise Davis-McFarland and provides services through three components: a High School Component, which employs three full-time counselors to work in the Tri-county's twenty-six public high schools; a Community Component, which employs two full-time and one half-time counselors to work in three neighborhood centers; and a Postsecondary Component, which employs a Tutor Coordinator and a Transfer Advisor. In addition to providing direct services to clients, the EOC program, through its Transfer Advisor, is working with faculty and administrators to identify and to begin to resolve interinstitutional transfer and articulation difficulties.

The U. S. Department of Education has announced that the Consortium will receive a two-year renewal EOC grant and the Consortium and the Department are in the process of budget negotiations.

Biomedical Sciences Program Proposal

The Consortium is planning to follow up the EOC program with additional efforts to strengthen liaison with this area's public school systems. One such effort has been the Medical University's and College of Charleston's joint development of a Biomedical Sciences Program proposal for submission to the U. S. Department of Education. If funded, this program would encourage seven school districts to prepare disadvantaged students for eventual entry into health careers; the program would involve students starting at the ninth grade level and continuing through the end of their freshman year in college. The Department of Education is due to announce its funding decision in September.

Composition Teaching Strategies Course

In its efforts to identify additional areas of cooperation with secondary schools, the Consortium held a series of meetings with Charleston County Schools representatives to discuss the need for improving the teaching of writing in the secondary schools. As a result of these meetings, a special session was held at Fort Johnson High School in March to familiarize secondary school teachers with the colleges' writing standards and a graduate course on composition teaching strategies was offered this summer through The Citadel and taught by a faculty member from the College of Charleston.

Humanities-in-Medicine Activities

Among the humanities-in-medicine activities conducted during the year were the introduction of an interdisciplinary course on "Values and Issues in Health Care" as an elective in the College of Allied Health Sciences, a faculty workshop and a Presidents' Forum by Dr. K. Danner Clouser, Professor of Humanities at Pennsylvania State Medical School, class visits, a poetry workshop and Presidents' Forum by the poet, Vassar Miller, faculty development seminars in the Colleges of Medicine, Nursing and Allied Health Sciences, the development of a Summer Humanities Reading Program and Retreat for students entering the College of Medicine this August, and the submission of a curriculum development grant to the U. S. Department of Health and Human Services.

Interinstitutional Faculty Meetings

During the Spring, meetings were held by Consortium faculty representatives from nine disciplinary areas—English, history, languages, biology, chemistry, physics, mathematics, computer sciences, and business administration. Agenda items at these meetings included undergraduate and graduate curriculum development, transfer and articulation, and joint faculty enrichment activities. Most of the groups elected a chairman, all of the groups decided to hold additional meetings beginning this fall, and all showed interest in planning department-wide enrichment activities (e.g., symposia, conferences). In addition to staffing these ongoing groups, the Consortium office will also initiate meetings of new groups this fall—e.g., in education and engineering.

Staff Development Activities

Among the staff development projects conducted during the year by the Student Affairs and Career Development Committees were two surveys of staff development needs, the sponsorship of a two-day Peer Career Development Retreat in January and a Career Skills Assessment Workshop in March, the opening up of various institutional workshops for Consortium-wide participation, and the submission of a comprehensive staff development program proposal to the Fund for the Improvement of Postsecondary Education. Although not funded, the proposal was ranked within the top 10 percent of submitted proposals and the Committees are currently considering alternative funding sources.

Continuing Education Center

Under the direction of Dr. R. Ramsey Mellette, the Director of MUSC's Division of Continuing Education and Chairman of The Consortium's Continuing Education Committee, the Continuing Education Task Force of the Medical University's Long Range Planning Committee worked throughout the year to develop plans for a joint continuing education conference center. The Committee has drawn up a prospectus recommending the construction of a residential and meeting facility that would accommodate meetings of up to 750 persons and up to 500 meetings a year: a center of this size would meet the major continuing education facility needs of the local institutions. The Committee will formally submit its recommendations to the appropriate Consortium committees this fall.

Cooperative Projects With Trident 2000

Throughout the past few years the Consortium has worked closely with Trident 2000 in that organization's efforts to promote citizen involvement in public policy decision-making. This past year, the Consortium, along with South Carolina ETV, co-sponsored Trident 2000's major undertaking, a series of four ETV broadcasts that examined Tri-county citizen participation in four areas—the public schools, local taxation, energy and the environment, and the criminal justice system. The series was broadcast this spring, funded by grants from the S. C. Humanities Committee, the National Endowment for the Humanities, the Ford Foundation, and the Rockefeller Family Fund.

In June, the Consortium and Trident 2000 were awarded a grant by the S. C. Humanities Commission to conduct a series of scholarly and public conferences examining the differences in public, professional and cultural values that are implied in the preservation, utilization or development of natural resources. This conference series will be presented over the coming year under the title "A Consideration of Growth in the Trident Area: From the Academy to the Marketplace."

Finally, Trident 2000 is engaged in an intensive long-range planning consideration of its own growth. In view of its history of constructive cooperation with the Consortium, Trident 2000 has proposed that it undertake a more formal partnership with the Consortium to form a Citizen Resource Center; the Center, which would become the principal focus of Trident 2000, would undertake a variety of "brokering" functions to facilitate citizen participation

in activities throughout the Tri-county region—e.g., through offering information and referral services, training workshops and public interest conferences and symposia, and a research capacity for citizen participation issues. Trident 2000 will formally present this recommendation to the Consortium's Executive Committee at its September meeting.

Consortium Newsletter

A newsletter has been instituted to keep faculty and staff abreast of Consortium activities as well as to publicize the Consortium to interested groups and individuals within the community. The first issue was published in May, 1980, and subsequent issues will be published on a quarterly basis.

State and Local Women Educators' Networks

This spring, Dr. Monica Hamill, Consortium Associate Director for Programs, was elected Coordinator of the South Carolina Network of the American Council on Education's National Identification Program for Women Administrators in Higher Education. The purposes of both the state and national programs are to identify women administrators of demonstrable potential and to assist their advancement through "networking" and professional development activities. In June, the Consortium hosted a luncheon meeting for the A.C.E. State Planning Committee and CHEC institution presidents, at which the latter affirmed their active commitment to the goals of the program and their support for its activities. The S. C. Network will conduct a major statewide conference in Charleston on December 4 and 5, 1980.

As an outgrowth of the State Network, a local women educators' network has also been established. This group, which is being coordinated by Dr. Sue S. Desmonde, Dean of Continuing Education and Community Services at the College of Charleston, plans both to serve CHEC professional women through activities that will complement the State Network's work and to establish a broader based network of Trident-area professional women. Towards the latter end, the network has sponsored three receptions for professional women and plans to continue hosting these meetings on a monthly basis; the network is also in the process of compiling a directory of participants and resources.

Grants Summary

Although external funding should be neither the only nor the primary gauge of the Consortium's success, it is noteworthy that the Consortium has been instrumental in helping member institutions and cooperating organizations to secure a significant amount of grant support. Over the past two years, the Consortium has been awarded or has participated in grant awards totaling nearly \$700,000. The two Consortium proposals currently being reviewed (Experimental Program to Stimulate Competitive Research and the Biomedical Sciences Program) will, if funded, bring in an additional \$476,000 in grants, and proposals now in planning will, if submitted, request more than \$800,000 from funding agencies. Finally, grant proposals that have an interinstitutional dimension (e.g., the involvement of one or two faculty members from other than the home institution) have been submitted to external agencies within the past year requesting total funds of more than \$500,000: while these proposals are not "Consortium" projects, they constitute nonetheless, a significant index of the extent of purposeful and productive cooperative activities that CHEC faculty members, in particular, are pursuing.

CHARLESTON HIGHER EDUCATION CONSORTIUM

Summary of External Funding July 1980

A. Awarded:

1. National Science Foundation (for a survey of continuing education needs in tri-county industries), 1978-81	\$ 20,000
2. Trident Work-Education Council (CHEC/industry liaison), 1978	1,000
3. CETA (for secretarial position), 1978-79	13,285
4. S. C. Arts Commission (Affiliate Artist residency), 1979	3,500
5. S. C. Humanities Commission (humanities-in-medicine planning), 1979	3,000
6. Health Sciences Foundation (for health care evaluation planning), 1979	7,500
7. S. C. Title I (for a conference on Health Care Coordination), 1979	12,000
8. U. S. Department of Health and Human Services (Educational Opportunity Center program), 1979-80	198,000
9. Employment Security Commission: S. C. Occupational Information System (lease fees for 7 SCOIS terminals), 1979-80	10,500
10. S. C. Humanities Commission (with Trident 2000, for ETV series on public issues), 1980	35,000
11. National Endowment for the Humanities (with Trident 2000, for ETV series), 1980	24,000
12. Ford Foundation (with Trident 2000, for ETV series), 1980	15,000
13. Rockefeller Family Fund (with Trident 2000, for ETV series), 1980	15,000
14. ETV (in-kind for ETV series), 1980	103,000
15. Sea Grant (College of Charleston: Summer Undergraduate Research Program in Marine Sciences), 1979 and 1980 (2 grants)	27,400
16. S. C. Humanities Commission (with Trident 2000, for a series of conferences on growth in the Trident area), 1980-81	4,500

17. U. S. Department of Education (EOC renewal), 1980-81	201,207
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TOTAL	\$ 693,892
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B. Pending:

1. National Science Foundation (Experimental Program to Stimulate Competitive Research), 1980-83	\$180,000
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2. U. S. Department of Education (Biomedical Sciences Program), 1980-81	296,000
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TOTAL	\$476,000
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C. To Be Submitted:

1. Mott Foundation (Trident 2000), 1980-81 ..	\$120,000 (est)
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2. U. S. Department of Education (EOC Re- newal), 1981-82	250,000 (est)
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3. Agency to be determined (Consortium— Council for Interinstitutional Leadership Con- ference)	27,000 (est)
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4. Agency to be determined (Health Care Evalu- ation—planning grant)	30,000 (est)
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5. Public Health Service (Health Care Evalua- tion—Training and Program Development), 1982-83	300,000 (est)
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6. Agency to be determined (Student Affairs Staff Development program), 1981-84	150,000 (est)
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TOTAL	\$877,000
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